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SEPTEMBER, 1903.

No. 1

# EDUCATION

A MONTHLY MAGAZINE

DEVOTED TO THE SCIENCE, ART, PHILOSOPHY  
AND LITERATURE OF EDUCATION

RICHARD C. BOONE, EDITOR.  
FRANK H. PALMER, EDITOR.

## CONTENTS.

|                                                                                |    |
|--------------------------------------------------------------------------------|----|
| Classification in Elementary School Curriculum. <i>Harvey Andrew Peterson</i>  | 3  |
| Financing High Schools. <i>Supt. Charles S. Joss</i>                           | 10 |
| The King Arthur Legends in the Hands of the Poets. <i>William V. Lombard</i>   | 38 |
| The Health Factor in its Social Aspect. <i>W. B. Barlow, M.D.</i>              | 38 |
| Impressions of the N. E. A. Convention for 1903. <i>Charles A. Smith, M.D.</i> | 44 |
| Editorial                                                                      | 60 |
| Foreign Notes                                                                  | 66 |
| Book Notices                                                                   | 86 |
| Periodical Notes                                                               | 84 |

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## CONTENTS.

|                                                                                                                |     |
|----------------------------------------------------------------------------------------------------------------|-----|
| Arithmetic: Checks, and the Habit of Accuracy. Joseph V. Collins . . . . .                                     | 102 |
| Alcott as a Pioneer Educator. Annie Russell Marble . . . . .                                                   | 153 |
| Animal Life, The Study of: Its Place in the Public Schools. Prof.<br>S. J. Hunter . . . . .                    | 209 |
| April. (Poem.) Elizabeth Porter Gould . . . . .                                                                | 463 |
| Around London with Dickens. Caroline Sheldon . . . . .                                                         | 333 |
| At Midnight. (Poem.) Helen Cary Chadwick . . . . .                                                             | 343 |
| Bon Voyage—Through College. (Poem.) F. H. Palmer . . . . .                                                     | 73  |
| Book Notices . . . . . 59, 119, 190, 262, 316, 384, 447, 512, 572, 642                                         |     |
| Boys: The Higher Education of. Supt. William E. Chancellor . . . . .                                           | 167 |
| Buffalo, N. Y., Public Schools. Frank R. Jewett . . . . .                                                      | 598 |
| College Entrance Requirements, Some Thoughts on. Francis Ramaley . . . . .                                     | 277 |
| College, What is the Best? Prof. Edwin G. Dexter . . . . .                                                     | 603 |
| Composition, Economy in Teaching. Alfred M. Hitchcock . . . . .                                                | 348 |
| Composition: The Use of the Model in English. Catherine A. Dole . . . . .                                      | 426 |
| Composition Writing, Individual Work in. Margaret Alton . . . . .                                              | 306 |
| Course of Study, Seven Year. Henry Sabin . . . . .                                                             | 108 |
| Curricula, Problems in High School. Prof. John W. Wilkinson . . . . .                                          | 193 |
| Curriculum, Classification in Elementary Schools. Harvey Andrew<br>Peterson . . . . .                          | 1   |
| Defective Children and the Public Schools. John T. Prince . . . . .                                            | 340 |
| Dickens, Around London with. Caroline Sheldon . . . . .                                                        | 333 |
| Drawing, The Relations of to Other Subjects. Hermann Warner Wil-<br>liams . . . . .                            | 285 |
| Editorial . . . . . 50, 111, 183, 245, 309, 376, 439, 504, 565, 633                                            |     |
| Educational Ideal, A New. Prof. H. M. Burr . . . . .                                                           | 453 |
| Education as a Scientific Pursuit. Edward Franklin Buchner, Ph.D. . . . .                                      | 129 |
| Education at American Expositions. Prof. Frank Webster Smith . . . . .                                         | 222 |
| Education at the St. Louis Exposition. George E. Gay . . . . .                                                 | 208 |
| Education: Herbert Spencer's Essays on. John J. Tracy . . . . .                                                | 344 |
| Education in Porto Rico. A. W. Marvin . . . . .                                                                | 562 |
| Education of Backward Children, The. Jean L. De Forest, M.A. . . . .                                           | 401 |
| Education, Physical. F. H. Hain . . . . .                                                                      | 356 |
| Elementary Law in the Public Schools. R. B. Buckham, LL.B. . . . .                                             | 114 |
| English as a Foreign Language. Arland D. Weeks . . . . .                                                       | 470 |
| Evening High Schools. Supt. Charles S. Foos . . . . .                                                          | 16  |
| February. (Poem.) Elizabeth Porter Gould . . . . .                                                             | 339 |
| Flowers of Tennyson, The. Prof. Whitman Bailey . . . . .                                                       | 96  |
| Foreign Notes . . . . . 55, 116, 186, 248, 313, 380, 444, 509, 569, 637                                        |     |
| Free Text-Books in City Schools . . . . .                                                                      | 219 |
| Friend in Need, A. (Poem.) Martha Shepard Lippincott . . . . .                                                 | 425 |
| Geography Teaching: The Application of the Binocular Photograph<br>(Stereograph) to. William E. Long . . . . . | 526 |

|                                                                                                        |                                                 |
|--------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| German, First Year. Arnold Werner-Spanhoofd . . . . .                                                  | 581                                             |
| Health Factor in its Social Aspect. W. R. Bartlett, M.D. . . . .                                       | 38                                              |
| High School Reforms. Prof. L. A. Ostien . . . . .                                                      | 621                                             |
| Hill, Hon. Frank Alpine. Ray Greene Huling . . . . .                                                   | 179                                             |
| Imagination as a Practical Faculty. Caroline Sheldon . . . . .                                         | 148                                             |
| In the Fall. (Poem.) Helen Cary Chadwick . . . . .                                                     | 147                                             |
| In the Piazza San Marco. (Poem.) Isabel Hunter . . . . .                                               | 284                                             |
| Judge Not. (Poem.) Martha Shepard Lippincott . . . . .                                                 | 231                                             |
| King Arthur Legends in Hands of the Poets. Lillian V. Lambert . . . . .                                | 28, 81                                          |
| Moral Training. Principal J. C. R. Johnston . . . . .                                                  | 106                                             |
| Multiplication, What is? A. Latham Baker, Ph.D. . . . .                                                | 281                                             |
| Music in Elementary Schools. Principal Henry Lincoln Clapp . . . . .                                   | 548                                             |
| Music in Home and School. George E. Crafts . . . . .                                                   | 407                                             |
| Nature Study Movement, The. Walter E. Ranger . . . . .                                                 | 501                                             |
| N. E. A. Convention for 1903. Charles Cornell Ramsay . . . . .                                         | 44                                              |
| New Testament, Pedagogy of. Caroline Sheldon . . . . .                                                 | 630                                             |
| Periodical Notes . . . . .                                                                             | 64, 128, 192, 260, 324, 388, 452, 516, 580, 648 |
| Plants, Sensation in. Prof. Whitman Bailey . . . . .                                                   | 423                                             |
| Polytechnic Schools, The Co-ordination of. S. Edward Warren, C.E., . . . . .                           | 232                                             |
| Porto Rico, Education in. A. W. Marvin . . . . .                                                       | 562                                             |
| Program in Elementary Schools, The. Principal Ezra M. Sparlin, Ph.D. . . . .                           | 361                                             |
| Psychology and Pedagogy, Lessons in. John Ogden . . . . .                                              | 325, 411, 464, 538                              |
| School as a Factor in Industrial and Social Problems, The. Frank T. Carlton . . . . .                  | 74                                              |
| School Government: Some Factors of. Principal E. L. Cowdrick . . . . .                                 | 367                                             |
| Secondary Education, Some Readjustments in. Principal A. R. Brubacher . . . . .                        | 613                                             |
| Silas Marner, Outline Study of. Maud Elma Kingsley . . . . .                                           | 301                                             |
| Silence and Serenity. (Poem.) Elizabeth Porter Gould . . . . .                                         | 280                                             |
| Son of the Earth-Born. (Poem.) Helen Cary Chadwick . . . . .                                           | 561                                             |
| Song-Sparrow. (Poem.) F. H. Palmer . . . . .                                                           | 500                                             |
| Spelling Book, The Passing of the. Alice Ranlett . . . . .                                             | 556                                             |
| Spencer, Herbert. John J. Tracy . . . . .                                                              | 344                                             |
| State Education, The Mean Proportional in the Problem of. S. J. Hunter . . . . .                       | 485                                             |
| Sunday Schools, Pedagogical Defects of. Frederick E. Bolton . . . . .                                  | 380, 472                                        |
| Sun Spots, What are? Norman H. Crowell . . . . .                                                       | 496                                             |
| Superintendent, Leadership in. Andrew W. Edson . . . . .                                               | 65                                              |
| Supervisors, The. W. E. Chancellor . . . . .                                                           | 517                                             |
| Tennyson, Flowers of. Prof. Whitman Bailey . . . . .                                                   | 96                                              |
| Text-Books, Free . . . . .                                                                             | 219                                             |
| Three Quatrains. (Poem.) Charlotte Fiske Bates . . . . .                                               | 110                                             |
| Twilight Revery, A. (Poem.) Elizabeth Porter Gould . . . . .                                           | 400                                             |
| University Training and the Doctoral Degree. Robert MacDougall . . . . .                               | 261                                             |
| Wedding, A. (Poem.) Helen Cary Chadwick . . . . .                                                      | 641                                             |
| Williams College, Economic and Political Study in. C. J. Bullock . . . . .                             | 532                                             |
| Y. M. C. A. Training School at Springfield, Mass.: A New Educational Ideal. Prof. H. M. Burr . . . . . | 453                                             |

index, 1109





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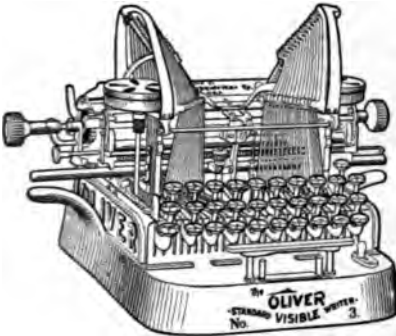
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The Emerson Memorial School at Concord this summer was a fitting celebration of the centennial of Emerson's life and influence. The school opened July 13th and continued three weeks.

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"The Educated Negro and His Mission" is the title of an able monograph by W. S. Scarborough. It is published by The American Negro Academy at Washington.

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EDUCATION for October will open with a fine paper from the pen of Superintendent Andrew W. Edson, of New York City, on "Leadership in the Superintendent"; we are sure that every superintendent in the United States will wish to read this article; Miss Lillian V. Lambert will continue her interesting consideration of "The King Arthur Legends in the Hands of the Poets"; Professor W. Whitman Bailey, LL.D., of Providence, R. I., will write about "The Flowers of Tennyson"; Frank T. Carleton, of Toledo, O., will consider "The School as a Factor in Industrial and Social Problems"; and Principal J. C. R. Johnston, of Allegheny, Pa., will discourse on "Moral Training." These articles will make up a number of permanent interest and value.

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at the gravel to the tree on the bank on Gilman's side. i went in 3 times today.

May 26. My rooster is sick. i gess he has et something. he sits all humped up. i went in swimming 2 times today.

May 27. My rooster is pretty sick. i tride to give him some kiann pepper tonite. father said kiann pepper was good for sick hens, so i held his mouth open and give him a spoonful. when i let him go he kept his mouth open and sorter sneezed pip-craw pip-craw pip-craw, and then he went to the water dish and began to drink. i think he is better because he hadent drank any water for 2 days before. he was still drinking when i went away. i gess he will be a lot better tomorrow.

May 28. What do you think, this morning when i went out to feed my hens i found

86

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## *Classification in Elementary School Curriculum.*

HARVEY ANDREW PETERSON, ST. LOUIS, MO.



It is well known that there are no classifications in nature. To classify is only to group things according to some resemblance, but after one is made, the possibility of other conflicting classifications of the same objects is as great as our power to perceive or think of resemblances between them. Any classification derives its worth and permanence from the need which created it and from the measure in which it fills the need. Just because the value of classifications is purely relative to their purposes, whenever a classification of elementary school studies is proposed it is in order to ask what the purpose was for which it was made. For example, a classification of elementary school studies may show that a course of study contains representatives of all the important types of human learning. It is valuable as showing precisely that fact. Whether it also fills the pedagogical need of the teacher in his relation to his pupils, in his task of developing in them that knowledge and skill and character, is a different question, which could be answered only by considering that side of the teacher's vocation.

The well-known division into content and form studies has, I believe, sprung from this pedagogical need. The following is a form of it. As will soon appear, it is based on the two factors found in any purpose, ends and means.

**CONTENT STUDIES.**

History.  
Literature.  
Geography.  
Nature Study.  
Arithmetic.

**SYMBOL STUDIES.**

Spelling.  
Grammar.

**MODES OF EXPRESSION.**

Speaking.  
Singing.  
Reading.  
Writing.  
Drawing.  
Painting.  
Modeling.  
Folding and Cutting.  
Woodworking.  
Sewing.  
Weaving.  
Cooking.

It was said that the classification is based on the nature of teleological action as involving ends and means. What in social life we call ends are content studies in the subject-matter of education. It is true ends never present themselves to us as abstract content, but always as something connected with persons. But the content studies are only the records of others' intentions and attainments with the personal or teleological aspect abstracted in the case of the sciences. Even here it is present when we use the facts of science in practical life. And we may safely say that, except perhaps with a few specialists, the orthographer and the grammarian, it is always in terms of the content studies, these five or others, of course in their teleological form, or of similar first-hand observations of our own whose teleological character has never yet been abstracted, that our blind impulses become clearly defined ends.

On the other hand, spelling and grammar, with the same exceptions, never were and never become to us ends, but are always means, just as a knowledge of gestures, or telegraphy, or musical notation is means. They are sciences of the vehicles of communication. In spelling and grammar it is necessary to bear in mind the meaning of the words, but in these sciences we are not interested so much in what the meaning is as in how it is denoted; *i. e.*, in the equivalenting of symbols and mean-

ing. Similarly the ability to read, sing or write, viewed *apart from the content*, is not an end but a habit useful in realizing purposes, hence a means.

The distinction between content and symbol studies on the one hand and modes of expression on the other, is based upon a difference in our social attitudes—receptive and expressive—which is carried over into the subject-matter of education. If the classification given is sound, theoretically, any mode may be used to express any content or any fact about symbols, although it is true certain modes have become recognized as the ones best fitted to express certain kinds of facts; *e. g.*, writing for the facts of history. But we also frequently express historical facts by paintings, statuary, tapestries, etc.

Thus, interpreted in the light of social life the content studies occupy theoretically a determining position as ends, the symbol studies and the modes of expression being subordinated to them as means, but not less important on that account. This does not mean that the content studies never were also means in social life and never become means. Knowledge of the relative hardness of metals enables one to select a suitable drill, which, however, plays the role of means in drilling a hole. But that is not the point. The point is that, so far as the subject-matter is involved, our impulses become clearly defined ends in terms of the content studies, and not in terms of the symbol studies and modes of expression.

In the public school systems of many of our large cities, the symbol studies and the modes of expression are, on the whole, unconnected with the content studies. They also are taught as ends, the ends being to acquire a knowledge of the verbal signs and a facility in the use of the signs, materials, and tools. That they are partly turned to account in the content studies does not alter the fact that they are also taught as ends. In the following pages it is proposed to consider the chief effects of this arrangement upon the symbol studies and the modes of expression. Four of them will be considered: reading, writing, spelling, and grammar. I shall try to show that the effect of pursuing these as separate branches is to make them primarily studies of forms, the content being miscellaneous and,



except in the case of reading, having no other value than to illustrate the forms. The conditions described are intended to refer only to the public school systems of our large cities, and to only some of them, but the number is not small.

Of the symbol studies and modes of expression, reading contains the most content. Not more than twenty years ago it was the custom to use only one reader a year. The same selections were read repeatedly for technique, and the content was gradually lost sight of to a considerable extent. Since then the introduction of supplementary reading in large amounts and the change to reading any selection only once or twice has resulted in keeping content uppermost. Drill in the technique of reading still has a place, but it is taught with abundant, interesting, and on the whole valuable, but still somewhat miscellaneous, content.

In writing or penmanship we have an example of the other extreme. There is practically no connected content in it. The efforts of teacher and pupil are directed wholly to getting correct position of the body, correct movement of the hand and arm, and correctly shaped letters. The advocates of penmanship as a separate study would not defend it on the ground that it offers sufficient content. They would advocate emphasis on form, even to the exclusion of connected content, as the best method of teaching writing, although they are not consistent, for they will not take the same position with regard to reading, and only a few will do so to-day with regard to drawing.

In spelling taught as a separate study the customary method has been equally direct, relying simply upon repetition of the letters and sounds until memorization has been obtained. In the three or four lower grades the words are selected either from the reading lessons alone, or from the various content studies and grammar. In the former case, when the spelling lesson immediately follows the reading of the text from which the words are taken, and the order of the context is retained, the spelling lesson is likely to have a coherent context. Spelling is then subordinate to reading. In the latter case, where the words are selected from various studies, it becomes impracticable to keep up the connection with the original text or oral

instruction, and quite commonly original sentences illustrating the meanings of the words are requested of the children during the spelling lesson. Then the content of the lesson as a whole becomes miscellaneous. In the four or five upper grades a text-book or speller is customarily used in which the words are grouped according to phonetic analogies (talk, walk, balk, or ale, ail, etc.) or to similarities in meaning (names of animals, articles of clothing, etc.). In this classified speller we see the transfer of coherence from the content side to the form side completed. As long as the words were kept in close connection with their original context, coherence was found in the context and spelling was subordinate to reading. Next the words were detached and arranged in lists. Then the content background faded and there was no coherence on either side. Lastly in the spellers the words undergo classification and there is formal coherence. Necessarily the content (sentences composed by the children) is miscellaneous. It may be remarked in passing, that the extension of the children's vocabulary by the method of giving illustrative sentences is a secondary object. The primary object, that upon which the most emphasis is laid, is the formal one; *i. e.*, to secure correct spelling.

In teaching grammar in the public schools it is customary to cover the field twice: once in the lower grades, emphasizing the art of correct expression; and again in the higher grades, emphasizing the scientific classification of the grammarian. A survey of some of the courses of study and text-books used in the lower grades reveals great differences in the order in which the subject-matter is arranged. The reason for this is that the subject-matter is only in part grammar, the rest being a collection of what we may call the conveniences rather than the necessities of written thought, punctuation, capitalization, letter forms and abbreviations. There is no particularly useful classification of them. They may be taken up in any order. If we abstract from these, in the more strictly grammatical part of the subject-matter there is a logical order which starts from the sentence as the unit of thought, passes to the identification of its elements, and the classification of these as parts of speech, and comes finally to the complete inflection and agreement of them.

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This order is frequently, though we cannot say usually, rigidly adhered to in the elementary course. In the majority of the public schools inflection and syntax are taught throughout the four or five lower grades with no attempt to be exhaustive, but only to get correct usage of the forms most commonly misused. The result is an order of topics which may differ considerably from the one we have outlined; but it is still an order determined by a classification of grammatical forms. Between the stages of this logical classification are scattered without much plan what were called the conveniences of written thought.

In this order the forms and conveniences, not the content in which they are clothed, are taught the child. An illustration from one elementary text-book will suffice to show the method of instruction. The usage which it is desired to teach is embodied in a number of sentences usually unconnected with each other. Then follow remarks and questions calling attention to the usage, then additional sentences framed to show the teacher whether the use has been comprehended, and to give the child practice in recognizing or using it. Then the next usage in the classification is taken up in the same direct way, followed by the next. Here again, as in writing and spelling, the child sees chiefly forms imbedded in miscellaneous and to him relatively valueless content.

There is another class of grammatical text-books and courses of study which seek to retain the logical coherence of the forms and also make the content coherent. The forms are still taught directly and in the order in which they occur in the logical classification, but there is an effort to make a connected content out of the sentences which illustrate any single usage. This is an exceedingly difficult thing to do well, and the resulting content is usually highly artificial.

Thus far we have been speaking of elementary grammar. The advanced grammar of the higher grades differs chiefly in that the logical classification of the forms is more rigidly adhered to, and more exhaustively treated. Technical terms are taught more freely.

We have shown that the effect of teaching knowledge of the symbols and use of the symbols, materials and tools apart from getting a positive and connected content is, at least in the case of writing, spelling, and grammar, to make them primarily studies of forms containing a miscellaneous and incidental and valueless content. The reason why the same is not true of reading is because the technical side of reading is no longer taught directly, but largely in subordination to getting literary, historical, and geographical knowledge, although much still remains to be done to give coherence to the subject-matter.

Here are really two factors which combine to bring about this condition. There is, first, setting up the mastery of the symbols, materials, and tools as an end itself. This is what makes the content subordinate to the forms. There is, secondly, classification of the subject-matter according to the supposed increasing difficulty of the forms and adjustments. The classification is what makes the content miscellaneous. It need not, however, be a classification of *forms and adjustments* in order to render the content miscellaneous. It may be a *content* classification; *e. g.*, in spelling, the classification of words according to similarities in meaning. Arithmetic is not a form but a content study, yet its content has been rendered both subordinate and miscellaneous by a classification based on the abbreviations of the process of counting; *i. e.*, upon an aspect of its content. The distinction between these two factors—the relation of one study to another, and the tendency to over-classification within a single study—will be recognized in the following sections devoted to criticism. At times criticism will be directed against the non-subordination of the symbol studies and the modes of expression to the content studies; and at other times against unnecessary or premature classification. We begin with the former.

One objection against teaching the symbol studies and the modes of expression apart from a valuable and connected content has been clearly stated by others.<sup>(1)</sup> In life outside the school we are interested in ends primarily, and in symbols and

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1. Prof. J. Dewey, *The Elementary School Record*, 1900, pp. 49-52, 230-1; Supt. C. B. Gilbert, *Educational Review*, '96, Vol. XI, p. 316.

the different ways of doing things only as they are instrumental in securing the ends. It is contended that the child is not different from the adult in this respect; indeed, being capable of a less degree of abstraction can stand less concentration on means apart from ends. To treat the symbol studies and the modes of expression as *co-ordinate* with the content studies is for the child an undue separation of ends and means, with the result that he fails to see the application of the symbols and modes of expression, hence has little motive for acquiring them. Or, if through their employment in the content studies the child does see their application, they are also continued as separate studies, and there they are not embodied in a content which he regards as worth getting or communicating. This is the question of motive, of getting the motive which actuates the child to acquire the symbols and modes of expression to be an internal motive, his motive, rather than a more or less uncomprehending compliance with outside requests. If reading and writing, spelling and grammar, are means to ends in normal social life they should be presented as such to the child, *i. e.*, in subordination to some positive content. And once more by this is meant not in subordination to abstract content, or to any content whatever, but to content, either direct experience or information, as it is found in ends which the child presents to himself under the stimulus of a sufficiently varied environment.

There is another objection to teaching the symbol studies and modes of expression as separate studies which is not so often stated. As already shown at length, when the forms and habits are made ends pursued for their own sake they, not necessarily it is true, but nevertheless almost irresistibly, undergo a classification which determines the order in which the topics are taken up in these studies. This leads to frequent oversteppings of the child's circle of experience. To pass over the doubt whether the child comprehends the philosophy of the copy book, it is now generally admitted that the words selected for spelling should be limited to the children's written vocabulary. Yet in a typical speller used in many cities at present, the principle of phonetic analogy leads to the introduction in the fourth grade of the following words: blithe, niche, gripe, copse, scud, thyme,

craunch, sward, ruse, cloy, whorl, eyrie. Similarly in grammar an arrangement of the subject-matter according to a logical classification of grammatical usages leads to the introduction of sentences beyond the children's comprehension, of which the following taken from a single page are examples: (fifth grade) "Between the mind of man and the outer world are interposed the nerves of the human body." "Feudalism did not and could not exist before the tenth century." "By perfection is meant the full and harmonious development of all the faculties." "All forms of the lever and the principal kinds of hinges are found in the body." This error permeates also the content studies wherever a logical in contrast to a psychological classification determines the order of topics. In arithmetic it leads to the use of large numbers in connection with the subject of numeration in the third grade; to the use of rarely used units of measure in the fourth and fifth grades; and to business transactions beyond the experience of the children in the fourth to seventh grades.

A third objection is the miscellaneous character of the content. We have dwelt much upon this feature because it is fatal to interest, if continued long. In the public school system of one large city miscellaneous unconnected content filled an average of about one half of the total school hours in eight years. The studies which contributed the miscellaneous content were writing, spelling, language and grammar, arithmetic and algebra. Five thousand six hundred and ten minutes weekly in all eight grades were devoted to these subjects, and 5,975 to all other subjects and exercises. There is a place in the school for this miscellaneous content. Its place is not to be a substitute for the coherent progressive content, through which the child becomes acquainted with the forms, but to follow that, and its function is to give the child material for gaining speed in recognizing and using the forms. When restricted to its normal place, it would probably come nearer to occupying a sixth than a half of the total school time, and of course not the whole time devoted to any one study. The exact amount would be determined by the degree to which the child's interest in the ends upon which he is engaged—some coherent progressive content



—could be carried over to the acquirement of a better technique through practice on a miscellaneous content.

Thus far we have dealt with the results of teaching the symbols and modes of expression as ends to the neglect of the content, although in doing so we were obliged also to criticise the logical classifications in which the tendency to isolate forms usually ends. The situation of arithmetic in the public schools to-day is however an instance where a content study is suffering from injurious classification. First the quantitative aspect of objects was rigidly isolated from the qualitative. Counting was seen to be the fundamental operation, and nearly all the other numerical processes were “devices for speed,” of which the chief ones were the multiplication and decimal methods of grouping. These “devices for speed” were arranged in a series of increasing complexity, the later using the earlier in combination. The principle is a well-known pedagogical principle. It is psychological as well as logical. But the classification was carried out so minutely that the content became miscellaneous even within a single ten minutes in many cases. It led to an arrangement of topics in which the increasing complexity is often purely imaginary. Twos are the topic for the second grade, first quarter; threes, for the second quarter; fours, for the third; and fives, for the fourth quarter; and this is only typical of what may be found in other grades. The result of this extreme classification is that the teacher is left too little latitude for the introduction of continuous and interesting content. A principal of one of the Chicago public schools recently said to me, “I have been seriously thinking of teaching seventh and eighth grade arithmetic through a grain elevator. Do you know of anything which in its construction and management brings in more of the arithmetic topics of these grades?” There are of course practical difficulties here—the need of simplification, and how enough first-hand experience can be furnished—of which constructive work carried on in the schools is a partial solution.

To point out the predominance of the logical classification and the resulting miscellaneous content in arithmetic merely emphasizes how severely—and by this is meant prematurely—

the quantitative side of things has been isolated. In confirmation one needs only to observe the deplorably common attitude of public school children above the second grade towards arithmetic. They look upon *it* and their own *lives* outside the school as two different things. Hence their body of first-hand experience which we call common sense forsakes them in the arithmetic lesson, and they solve problems merely by rote. The transition from the undifferentiated qualitative and quantitative acts of persons in daily life to " $\frac{3}{4}$  of 17,  $\frac{1}{2}$  per cent of 914 is what number?" is too abrupt.

The place of logical classifications of subject-matter in elementary school instruction has been much misunderstood. It would be interesting to trace out the purposes for which the current classifications in the various content and symbol studies and modes of expression were originally devised. We should find that many of them were not devised for pedagogical purposes, but for the use of adults. They were introduced into the material and process of instruction because they were the shape in which the teacher's knowledge finally existed. But we can only point out the general place of classifications in the elementary school.

The primary use of classification is to sum up one's experience in a form readily accessible to the owner. All topical reviews are classifications of this kind. To get the real benefit the children themselves should classify their experience periodically, aided by the teacher in selecting the basis of classification likely to prove most serviceable.

Secondly, classifications have a use in suggesting short cuts in the experience of others. These short cuts are, however, available in the elementary school in subordination to the nature of mental activity and to the order of mental development. We have tried to point out that the use made in the public schools of the classifications of the forms in writing, spelling, and grammar, and of the groupings to facilitate counting in arithmetic, does violence to the nature of the child's mental processes, because only under certain circumstances, defined above, is he interested in the miscellaneous content which inevitably results from such classifications.

Our criticism thus far has suggested only general directions of change. The question of importance is with regard to the specific changes advised, and as to their practicability with the present average expenditure per pupil.

I should say that the abandonment of reading as a separate study and with it the present composite readers is practicable. History and geography in very simple form, yet of coherent and progressive content, should be introduced also into the earlier grades, even the first. Reading would then be taught in connection with them, and with nature study and literature. In some public schools reading by the children of their own compositions has been found to have advantages over text-books in the first two or three grades, although text-books were not given up. This should meet with considerable favor, because if geography and nature study are ever to become successful in the lowest grades, they must become mainly the working over of class and individual observations at first hand. This would insure to the reading of written exercises a prominent place in reading work of the lowest grades.

The teaching of writing, spelling, and elementary grammar through composition and occasional dictation based on the content studies is, I believe, the most natural way to give these studies a connected and interesting content, and at the same time adequately motivate their study. This also obviates the difficulty, often experienced under the other method, of getting the children to apply their knowledge. When it is learned apart from their own expression, it often remains isolated. This means first the discontinuance of the so-called copy books. A composition book in which the children copy some of their written exercises after correction might be used. Models of correct penmanship are of course retained for convenient reference. Secondly, it means that spelling is taught chiefly by correction of the children's mistakes in their written exercises. The advantages of this method over the use of the graded word list are economy of time and preservation in the children of the natural motive for learning to spell, viz., ready and accurate communication of thought. Some children learn to spell a word much sooner than others do. By having all the chil-

dren spell all the words the same length of time, much time is wasted, and the need and value of the study are not brought home to the child.

That part of the classified spellers which is based on phonetic analogies of words is, owing to the peculiar character of the English language, in clear violation of the psychology of association and should be discontinued entirely. Details cannot be given here.

Thirdly, to teach writing, spelling, and elementary grammar in connection with composition means that in grammar the logical classification of grammatical forms does not determine the order of topics. This, however, does not mean dissipation of energy. The order of topics is determined by the children's natural need in composition as it develops under the teacher's guidance. By suitable emphasis the teacher concentrates his efforts on certain of the most common errors, ignoring the rest, until these are usually absent. But he has the logical classification of forms clearly in mind, and is alert to the occurrence of good opportunities to introduce new topics even to single pupils. A two years' course in advanced grammar in the upper grades would form a recapitulation and classification of the usages treated in the elementary course.

The changes in writing, spelling, and grammar are the easiest to make since they involve no additions to equipment, and no unmanageable change in the amount of activity of the pupils in the schoolroom, and consequently practically no decrease in the number of pupils per teacher. Many public school systems have already made these changes partly or wholly, varying in details from the plan described, but agreeing in principle. The Rochester schools and the Washington School in Chicago are examples.

To remedy the isolation and over-classification in arithmetic is a far more difficult problem. A quite successful solution of it has been worked out in the University of Chicago Elementary School by subordinating arithmetic to the actual demands for it in school life, except with the children nine years old and over, who have periods of drill in number work to gain facility. Construction work has a far more prominent place in this school

than in the public schools. Cooking, woodworking, and science experimentation (especially applied physics) are found to be the modes of construction most fruitful of arithmetical opportunities. I do not mean that on this plan the complexity of the numerical processes is disregarded. No doubt it is reduced to what is really essential. Then the construction work, school accounts, etc., are so selected as to conform to this minimum, and still present to the child a connected, progressive content adapted to call forth his interest and effort.

That part of this method which concerns the subordination of arithmetic to the need for it in the constructive work of the school is impracticable in the public schools without a considerable increase in the present average expenditure per pupil. But all of the arithmetical processes except mensuration (including involution and evolution) are used as much in commercial transactions as in cooking, woodworking, and science. For this reason with no increase in expenditure much can be done to give arithmetic a more continuous and less abstract content; first by reducing the classification according to complexity to what are really important differences. The four processes with integers, and with fractions not involving formal factoring, and the decimal system through three or four places should precede long multiplication and long division. But the former need not be faultless before the latter are begun, since the latter give much practice in the former. All in these two groups should precede those fractions which necessitate formal factoring, nearly all <sup>(1)</sup> of decimal fractions and percentage. Powers and roots and their application in mensuration form a fourth group in time. Ratio and proportion belong to all the groups. Among the several topics which form any one of these groups there is no precedence of any consequence. They may well be taught together much of the time. Yet the first group covers a little less than one-half of the whole course in arithmetic, the second a few weeks, and the third about three-eighths.

After unnecessary classification is eliminated it becomes for

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1. Supt. J. M. Greenwood in Rept. Com. Fifteen, Educational Review, '95, Vol. IX, p. 290.

the first time possible to introduce a content possessing something of the progress of thought which the story form possesses, extending through a single lesson or through several lessons. If the transactions be drawn from the school, the home, the neighborhood, and the city in which the children live, it is possible through demonstrations in the schoolroom, dramatic, documentary, etc., and through excursions to supply the present notable deficiency of first-hand acquaintance in children above the second grade with the social occupations in which the arithmetical processes of the third to eighth grades are used. Both of these innovations—the coherence of content and the direct experience—will serve not to make arithmetic qualitative, but to make the transition from the unitary qualitative and quantitative to the quantitative gradual, keeping pace with the child's power to abstract. It is not claimed that these changes will produce the desired change in the motives which actuate the child to study arithmetic. They will do so only so far as the children in imagination easily and naturally identify themselves with the actors in the situations thus made vivid to them.

## *Evening High Schools.*

SUPERINTENDENT CHARLES S. FOOS, READING, PA.



F all recent agencies to educate the masses, the evening high school appeals to me as one of the most effective. Fifteen years ago little was known of an advanced evening school, and the pioneers in the work, no doubt, were compelled to argue long and vigorously in behalf of such an institution of learning. The burden of proof, however, is shifting, and to-day thousands instead of hundreds are among the advocates of the evening high school. Thus far, however, this mode of education has been confined to about twenty-five of the larger cities. The elementary evening schools have had such an uncertain tenure that, as one superintendent puts it, "Few of us have ventured far beyond the coast in evening schools."

The failure of elementary evening schools does not entail the failure of an evening high school. The evening high school appeals to an entirely different class of pupils, and wherever it has been fairly tried it has proved a success. In every community many boys and girls leave school before beginning or completing the high school course. Later comes the longing for something higher, something better, something nobler; young men and young women dream of and plan a life that leads them to increased remuneration or to more distinguished achievement. The success of the evening commercial colleges, the Young Men's and Young Women's Christian Association educational classes, the correspondence schools, the Chautauquan and University Extension courses, and the many other potent factors enlisted in the cause of education, verifies this. Notwithstanding the fact that many of these educational forces are doing an excellent work and helping upward many deserving young men and women, the evening high school fills a peculiar and important place of its own. With free text-books and free instruction, this school is open for any prepared to do the work. Then, too, the pupil nightly comes in contact with the teacher,

has the benefit of continued personal instruction, thus making the possibilities of discouragement or failure less.

The value of an evening high school to a community is inestimable. It appeals to young men and young women who have neglected their opportunities and realize it; it reaches the young men and young women whose services are required to help support the family; above all, it affords an equal opportunity to all better to equip themselves for the duties of life, not only from a utilitarian or practical point of view, but from the æsthetic as well. In such a school young men and young women may not only be started to make a more comfortable livelihood and to develop keener minds, but they may be led to a higher ideal of living. One of the objects of the evening high school, as the Boston prospectus puts it, should be "to raise the moral and intellectual standard of the community by preparing pupils to become more intelligent citizens, to make better homes, and thus to increase public and private welfare."

The evening high school cultivates a taste for better things. Boys and girls gradually realize what they are and what they might be; they begin to read, and their horizon broadens; they become young men and young ladies. As Principal Coolidge, of Cambridge, Mass., writes: "I have noticed very marked improvement in the appearance, behavior and spirit of boys and girls who have been our pupils, and have been surrounded with school influences instead of street companions. They become young ladies and gentlemen. The mere monetary advantages are too apparent to need mention. I have watched the influence of our school on many a mischievous boy, and have seen him become thoughtful, industrious, ambitious and self-respecting."

I was led to try the experiment of an advanced evening school or evening high school last winter, and I have been highly gratified with the results. The newspapers, the patrons, and the directors are much pleased with the experiment. The Reading, Pa., "Times" thus comments: "The establishment of a night school for advanced study has proven one of the most popular moves the Reading School Board has made. . . . The Board entered upon it with some misgivings, but to-day it is



a proved success, and even the most hesitating controller is now an enthusiastic supporter of the project. From the outset it has shown itself to be in line with a very general demand." The Reading "Herald" reads thus: "At the mention of night school there arises in many minds a vision of a dull, half-lighted sort of place, with heavy atmosphere, and either uniform misbehavior or uniform stupidity round about. To have all this dispelled one need only go to the night high school. . . . Whatever has passed over the spirit of their dreams, the school is one to make Reading throw out its chest and take off its bonnet to the teachers." The Reading "Telegram" and the Reading "Eagle" commend it with like enthusiasm. Principal H. R. Brunner in a report says, "Its success has surpassed my most sanguine expectations." The success of the school is not to be wondered at. It fills a need. The attendance is voluntary, and this makes teaching easier and more effective. This is the universal opinion. Reading is one of the smaller cities that has undertaken the work, but, in my opinion, it will succeed equally well in still smaller places. Superintendents will be surprised at the large number who will apply for admission, at the interest and zeal manifested, and at the results obtained. Teachers as a rule experience more pleasure in teaching the evening schools of this character than the day schools. Of course, only the best teachers should be employed. A study of the evening high school problem will prove interesting. A few facts that I have gathered may be of service to any contemplating the project.

The evening high school is probably an American product, and in its crudest form has had an existence of less than forty years. It is difficult to ascertain just when the first effort was made in this country to establish an evening school for instruction in the higher branches. From 1860 to 1890, except during the Rebellion, Philadelphia had an Artisans' Evening High School. In 1890 the present evening high school was established. In New York and in Baltimore evening high schools were organized soon after the close of the Civil War. New York has eleven schools,—four male, six female, and one mixed; Boston, Chicago, and St. Louis have also had evening

high schools for many years. Of other cities that have evening high schools the age of each is as follows: Cambridge, Mass., 15 years; Washington, D. C., and Fall River, Mass., 14 years; Newark, N. J., 13 years; Cincinnati, Ohio, 12 years; Jersey City, Paterson, N. J., Los Angeles, Cal., 10 years; Worcester, Mass., and Providence, R. I., 9 years; Baltimore, Md., New Haven, Conn., and Lawrence, Mass., 8 years; Hartford, Conn., 7 years; Springfield, Mass., 6 years; San Francisco, Cal., 5 years; Albany, N. Y., 3 years; Cleveland, Ohio, Rochester, N. Y., and Reading, Pa., one year; Brockton, Mass., also reports an evening high school; Omaha, New Orleans, Milwaukee, Syracuse, Louisville, Pittsburg, Allegheny, Detroit, Toledo, Wilmington, Del., Des Moines, Indianapolis, Columbus, Scranton, Kansas City, St. Paul, Memphis, Minneapolis, St. Joseph, report that they have no evening high schools. From Denver no information was obtainable.

In the organization of evening high schools a number of problems have arisen, and it is interesting to note how the several cities have solved them. The number of months these schools are open varies from four to seven. The Reading, Pa., school was open six and one half months; New York, Worcester, and Springfield, six; Cambridge, and Providence, R. I., five and one half; Baltimore, Cincinnati, Lawrence, Washington, St. Louis, and Chicago, five; Philadelphia, four and one half; Hartford, New Haven, Albany, Fall River, four. San Francisco reports ten and one half.

The number of sessions per week varies in the several cities. New York, Chicago, San Francisco, Worcester, and Providence, R. I., have five; New Haven has five before Christmas and four after; Philadelphia, Baltimore, Hartford, Fall River, Cambridge, Washington, St. Louis, and Springfield, Mass., only three; Reading, Albany, Cincinnati, and Lawrence have four. Providence has some studies three evenings per week, and others two.

The number of recitation periods, the length of the recitation period, and the length of the evening sessions are by no means uniform. The majority of cities, however, have two periods; some have three periods; and several have four. Where there

are two periods, the length of the recitation period is invariably one hour. New York, Jersey City, Springfield, Worcester, Cambridge, New Haven, Providence, and Philadelphia have two periods of one hour each. Others vary in length from thirty (30) to fifty (50) minutes. Chicago, Cincinnati, and Albany have thirty-minute periods. St. Louis, Hartford, San Francisco, Lawrence, and Reading have forty-minute periods. Washington and Jersey City have forty-five-minute periods. Fall River has periods ranging from thirty minutes to one hour. Chicago, as far as possible, gives individual instruction. The Philadelphia school is conducted on the departmental plan. The instruction is here also largely individual. Different pupils work on various parts of the subject. Principal Christine of the Philadelphia school writes: "As most of our students are men, actual and regular recitation is a matter of much delicacy and has to be handled with much tact."

The enrollment, the average attendance, and the number of teachers employed wherever it was obtainable is interesting:—

|                         | Enrollment. | Average Attendance. | No. Teachers. |
|-------------------------|-------------|---------------------|---------------|
| New York (11 schools),  | 14,592      | 5,121               | 300           |
| Chicago (7 schools),    | 1,990       |                     | 58            |
| Philadelphia,           | 1,016       | 380                 | 28            |
| Boston,                 | 673         |                     | 25            |
| Providence,             | 1,341       | 590                 | 23            |
| Cleveland,              |             |                     | 6             |
| Cincinnati (2 schools), | 600         | 300                 | 17            |
| St. Louis,              | 362         | 202                 | 8             |
| Baltimore,              | 1,180       | 463                 | 22            |
| Hartford,               | 175         | 90                  | 6             |
| New Haven,              | 275         | 150                 | 13            |
| Albany,                 | 335         | 144                 | 8             |
| Fall River,             | 200         | 112                 | 9             |
| Lawrence,               | 357         | 256                 | 14            |
| Cambridge,              | 379         | 140                 | 10            |
| San Francisco,          | 230         | 176                 | 8             |
| Washington,             | 249         | 146                 | 6             |
| Worcester,              | 700         | 425                 | 25            |
| Springfield,            | 461         | 219                 | 14            |
| Los Angeles,            | 81          |                     | 3             |
| Reading,                | 175         | 110                 | 3             |
| Newark,                 | 530         |                     | 12            |
| Jersey City,            | 626         | 206                 | 12            |
| Paterson, N. J.,        | 400         |                     | 18            |
| Brockton, Mass.,        | 125         |                     |               |

These figures would indicate that the average attendance varies from thirty-five to seventy-five per cent, San Francisco ranking highest. New York, Philadelphia, Baltimore, Jersey City, Springfield, Albany, Cambridge, and Providence seem to be below fifty per cent. The number of teachers employed is certainly creditable to the several cities. Washington and Reading have the highest number of pupils per teacher compared with the average attendance. This, however, is scarcely a fair comparison, as the number of teachers must depend on the number of classes and subjects taught. The average attendance in every city is largest before the Christmas holiday, hence it is advisable to begin an evening high school as early in October as possible.

Of the enrollment where the schools are open to young women, from fifteen to fifty per cent is female. Springfield has the highest, the female enrollment being fifty-five per cent. Cambridge, New Haven, and Hartford have fifty per cent; Worcester, Fall River and Washington, forty-five per cent; Lawrence, forty per cent; Providence, thirty-five per cent; Albany and Reading, thirty per cent; Cincinnati and Baltimore have only twenty-five per cent; and San Francisco less than fifteen per cent. Cleveland does not admit young women, as the course thus far comprises only manual training, higher mathematics, and mechanical drawing and designing. New York has six evening high schools for women only. The mixed school in New York has a female attendance of over sixty per cent.

In nearly every instance the enrollment increases from year to year. In Albany the increase is marked. In three years, the figures are 117, 211, 335 respectively. Springfield, Mass., reports a gain of 148 in six years. Providence has an annual increase of 100. Washington, D. C., in 1902, apparently shows a decrease, the approximate enrollment each year being 400, and the enrollment for 1902 being 249.

X In regard to the courses of study and subjects taught there is a great diversity. The curricula vary very much in the several schools. The Boston evening high school has probably the most exhaustive course of study. It includes almost the

entire range of secondary school topics with the exception of Greek. The course emphasizes the literary. A diploma is awarded on twenty-four points. The following is the Boston scheme :—

Elementary English Composition, Rudiments of Latin, Municipal Government, Economics, Elementary Phonography, Commercial Geography, Commercial Law, one each; Advanced English Composition, Elementary German, Advanced German, Elementary French, Advanced French, Elementary Spanish, Advanced Spanish, Elementary Latin (Cæsar), History and Civil Government of the United States, History and Civil Government of England, History of Ancient Greece and Rome, Physiology and Hygiene, Physics: First Course, Physics: Second Course, Chemistry: First Course, Commercial Arithmetic, Elementary Algebra, Advanced Algebra, Plane Geometry, Solid Geometry, Elementary Bookkeeping, Advanced Bookkeeping, Typewriting, two each; English Literature: Earlier Authors, English Literature: Later Authors, American Literature, German Literature, French Literature, Spanish Literature, Advanced Latin (Vergil), Chemistry: Second Course, Penmanship, Advanced Phonography, three each.

The New York, Providence, and Cincinnati courses practically cover the same ground and emphasize drawing,—mechanical, architectural, and freehand. The Philadelphia course is entirely practical, and includes chemistry, electrical science, civil government, history, advanced English, algebra, geometry, mensuration, trigonometry, freehand, architectural and mechanical drawing, bookkeeping, penmanship, business arithmetic, stenography, and typewriting. Baltimore names the following studies in the order of popularity: White school—drawing, bookkeeping, mathematics, science, English, history; colored school—domestic art, English, mathematics, drawing, wood and iron work, Latin, science. Providence gives a commercial bookkeeping, a commercial shorthand, and a standard course and three splendid drawing courses. Lawrence and Worcester have an excellent general course. Fall River has a civil service course, including also arithmetic, algebra, and rhetoric. Albany and New Haven have Latin, French, chemistry, physics, geometry, algebra, English; but bookkeeping, drawing, and stenography are the popular subjects. Hartford has four courses,—commercial, stenography, civil service, college. Cambridge has added carpentering to its general course, and it has proved a valuable addition. Washington has only a

commercial course. The San Francisco course covers a wide range, including an academic, preparatory to the university, commercial, literary, scientific, and technical. The drawing department includes naval architecture. Jersey City has a commercial and drawing course. St. Louis offers English, algebra, geometry, physics, chemistry, drawing, and bookkeeping, and if twenty qualified pupils apply for instruction in a high school study of technological character, it is the intention to make provision for them. The Springfield, Mass., Evening School of Trades is a phenomenal success. Many applicants were refused admission because of lack of accommodation in the shops. Pattern-making, electricity, drafting, drawing, plumbing, mathematics as applied to the mechanical trades, and other practical instruction is included in the course. Chicago gives stenography, bookkeeping, architectural and mechanical drawing. During the past two or three years an effort has been made to introduce chemistry, Latin, French, German, English, and algebra with reasonable success.

In the cities canvassed, studies are generally elective. In Washington no studies are optional. All branches are required for a diploma. They are shorthand, arithmetic, bookkeeping, English composition, grammar, and penmanship. In Cambridge, Mass., all candidates for diplomas take English and history. Hartford and Reading require pupils to elect two studies. In Chicago studies are entirely elective. Reading requires pupils to elect two studies. In New York City candidates for diplomas are required to take several essential subjects, including English. Jersey City requires all who take stenography to take English, and all who take bookkeeping to take arithmetic. In nearly every instance the most popular subjects are the commercial branches. San Francisco names the course preparatory to the university as the most popular; Fall River, the civil service course. In Washington all pupils take commercial studies; in Jersey City, 95 per cent; in Cincinnati and Albany, 65 per cent; in Hartford, Fall River, Cambridge, Providence, and Reading, 50 per cent; in New York, Lawrence, Springfield, and Worcester, 30 per cent; Baltimore seems to have the least number of commercial stu-

dents. In San Francisco the commercial evening school is separate.

The amount of work required for completion of the course is less than for the day high school. Most superintendents report either that the standard is lower or that comparison is impossible. Baltimore requires ordinary high school course. Springfield compares it thus: "Three years of 70 sessions of 2 hours each, against 4 years of 200 sessions of 5 hours each." This would total 420 hours for the evening school against 4,000 for the day. San Francisco reports it the same as three years of day school except that four years as a rule is needed for completion.

In regard to requirements for admission regulations differ but little. A very large proportion require the completion of the eighth or grammar grade or its equivalent; several set an age qualification of not less than 14 or 16. Philadelphia asks an age qualification of 17 and a certificate of vaccination. Albany admits at 14 and New York City at 16. St. Louis opens its school to all between 14 and 20. In Washington none are admitted over 21 years of age. In some cities there is no maximum age limit. In Providence pupils in drawing are admitted without an examination; others, unless grammar school graduates, are examined.

Wide diversity exists in regard to the requirements for certificates or diplomas. New York City has a four and six year course with 8 hours for the former, and 12 hours for the latter. Philadelphia gives a certificate for a 75 per cent attendance for the term. Boston required 24 points; New Haven, 6 branches; Jersey City, two years' satisfactory work; Providence, 400 hours covering four years. Springfield, Mass., desires "satisfactory work for three years"; Hartford, two and three years' work; New Haven, two subjects for three years; Lawrence requires nine of subjects taught, generally completed in three years. Worcester outlines an acquirement of eight certificates or four years' work. Cambridge requires for completion three years' attendance or six studies pursued successfully. Albany does not yet graduate its pupils. Fall River gives certificate for constant attendance and good and faithful work. St. Louis has

two years' work. Baltimore requires work of ordinary high school. The length of time required varies from two to six years.

The number of graduates in 1902 was as follows: Cincinnati, 60; Hartford, 90; New Haven, 12; Lawrence, 28; Cambridge, 14; San Francisco, 10; Worcester, 12; Springfield, 12. In 1903 the same cities had the following: Cincinnati, 45; New Haven, 10; Lawrence, 24; Cambridge, 8; Worcester, 16; Springfield, 14; Baltimore, 2; Providence reports 18 for 1903, its first graduating class. Of course, as Principal C. B. Ellis, of Springfield, Mass., says: "Most pupils do not attend the evening high school for the purpose of getting a diploma. Some desire only one subject, and when finished leave; others come for two or three subjects. Each comes because the evening high school offers something that he wants, and when this want has been satisfied, he drops out."

Cincinnati, Hartford, Lawrence, San Francisco, and Worcester have alumni associations.

The remuneration varies much. Principals are paid from \$2 to \$7 per evening. New York pays \$7; Jersey City, Paterson, N. J., and Reading, \$2; Cincinnati and Baltimore, \$3; Worcester, Springfield, Providence, Hartford, San Francisco and Chicago, \$5; New Haven, \$4.50; Philadelphia, St. Louis, Albany, Fall River, Newark, Lawrence and Cambridge, \$4. Assistant teachers receive from \$1.25 to \$5 per evening, New York paying the latter figure; Springfield, Lawrence, and Philadelphia following with \$3 per evening.

The cost per capita is difficult to get. It varies from \$2 to \$17.32, depending, I presume, on what is included. Some base it on average attendance, notably Springfield and Baltimore. Jersey City reports \$6.41; Springfield, Mass., \$10.79; Baltimore, \$7.29; Worcester, \$14; Cambridge, \$17.32; New Haven, \$10; Fall River, \$2; New York, \$12; St. Louis, \$6, and Providence, \$5.

In nearly every instance superintendents and principals report the schools as popular with the board and the people. The Baltimore evening high schools are not reported as popular with the school board, due possibly to faulty organization. One



superintendent writes that there has been "a great deal of criticism during the last year because of the large expenditure on account of the day schools; but I have yet to read or hear the first criticism of the expenditures on account of our evening schools."

A plan for an evening high school that appeals to me is a term of one hundred nights with four sessions per week excluding Wednesday, with three periods of forty minutes each. Three courses may be recommended: general, commercial and civil service. Twenty-four points should be required for graduation. Of course, pupils may take subjects under other courses and receive credit. They ought also to receive credit for work previously done in day high school. The civil service course may include the following: Arithmetic, 2 points; English grammar, 1; rhetoric and composition, 3; history of United States, 2; civil government, 2; spelling, 2; geography, 2; reading addresses, 2; mail routes, 2; penmanship, 2; elective, 4.

The commercial course may be the following: Commercial arithmetic, 2; English grammar, 1; rhetoric and composition, 2; letter writing, 1; bookkeeping, 3; penmanship, 2; phonography, 4; commercial law, 1; commercial geography, 1; type-writing, 2; history, 1; elective, 4.

The general course may be selected from the following: Latin grammar, 3; Cæsar, 3; Vergil, 3; Cicero, 2; rhetoric and composition, 3; English literature, 3; American literature, 2; algebra, 3; geometry, 3; trigonometry, 3; German, 4; physics, 3; mechanical drawing, 6; chemistry, 4; physiology, 2. Any class for which there is a demand may be formed. Grade teachers should be admitted to any of the classes.

Thousands of instances of the great good these schools have done might be cited. Many men prominent in life received their awakening in the evening high schools. Hundreds have received positions in entirely different walks of life; many have moved upward on the ladder. All are volunteer workers; all have a definite purpose, so that results are far ahead of day work, considering the time allowed. San Francisco has graduated two of its evening high school graduates from the normal school, and in drawing, several graduates have received excel-

lent positions. The board of supervisors are now estimating on a building for a polytechnic and academic evening high school, to cost \$100,000. Worcester names the case of a young man just graduated from Harvard Medical College who received his entire training in the evening high school. Cincinnati reports much good accomplished by evening high schools. Two male graduates are now in the employ of the United States Government at Washington; one attending a law and the other a medical school. Two are preparing for the ministry; two have graduated from the law school; others occupy positions as bookkeepers, stenographers, etc. Hartford cites an instance of a young woman graduate of Boston University securing a position at \$800 as teacher in stenography and typewriting after a year's course. New Haven has had cases of working boys going to college through the influence and help of the evening high school. Albany evening high school pupils pass regents' examinations required by law for students of law, medicine, and pharmacy. Fall River writes that it gives a start for Harvard, schools of technology, and normal school. Lawrence prepared a young man for medical school and fitted several for civil service. Baltimore gives the name of a man twenty-seven years old who in six years has become a skilled electrician. New York writes: "Our senior instructor in free-hand drawing began his professional study in this school." Reading with its one year work points to several in improved positions. The evening high schools for women in New York report many students as entering college, preparing for teaching and entering other useful occupations. All evening high school principals agree that an evening high school is a helpful and inspiring factor in a city, and that when conducted intelligently it will have a good influence on a community, make better citizens, and bring about a more exalted civic standard.

## *The King Arthur Legends in the Hands of the Poets.*

LILLIAN V. LAMBERT, DES MOINES, IA.



STUDY of the King Arthur legends takes us back nearly fifteen hundred years into the past to the primitive life of our race when England was still inhabited by the native Celts; but their great foe, the Anglo-Saxons, had already begun to push their way into the fair field of Britain, and it is in repelling these invaders that the Celtic hero, King Arthur, first wins renown.

These legends take us from the stern world of reality, which so characterizes the present century, into a fairy realm where the improbable and even the impossible is wrought through the charmed instrumentality of magic. Knighthood in all its youthful vigor is here depicted. Fair women, chivalrous men, heroic deeds of valor, jousts, and wars greet us on every page. Many of our poets have dipped their brushes into the bright colors that adorn these romances, and with them they have depicted some of the most beautiful scenes of chivalric love and adventure that English literature affords.

The King Arthur legends were first gathered into book form in the early part of the twelfth century by a priest of the Anglican Church known as Geoffrey of Monmouth. He claimed to have written a history of Wales from its mythical founder, Brutus, the grandson of Æneas, to Cadwallo, who reigned in 689. Milton represents Diana as speaking thus to Brutus in a vision:—

“ Brutus, far to the west, in th’ ocean wide,  
Beyond the realms of Gaul, a land there lies;  
Sea-girt it lies, where giants dwelt of old.  
Now void, it fits thy people; thither bend  
Thy course; there shalt thou find a lasting seat,  
Thou to thy sons another Troy shall rise,  
And kings be born of thee, whose dreadful might  
Shall awe the world, and conquer nations bold.”

—Ode to Geoffrey of Monmouth.

The material for this work was gathered partially from history, partially from legend, and partially from the writer's own fertile imagination. Like many of the English scholars of that day, he wrote in Latin. He called his work *Chronicon Sive Historia Britonum*. Other chroniclers declared that Geoffrey "lied saucily and shamelessly"; but whether truth or fiction, his so-called history soon gained a widespread popularity. It gave to future writers the story of Cymbeline and King Lear, together with King Arthur and his famous retinue of knights. Sir Thomas Hardy has said, "Indeed, it is hardly going beyond bounds to say that there is scarcely a European tale of chivalry down to the sixteenth century that is not derived, directly or indirectly, from Geoffrey of Monmouth."

The love of romance thus awakened soon spread beyond England into Europe. The French minstrels found here rich material which they embellished with their own fertile imaginations. In 1155 a Norman-French poet, Robert Wace, translated the Latin history into French verse. He it is who first mentions the Round Table. About fifty years later a Welsh priest, Layamon, rendered it into English, using the Southern dialect. He, too, added much of his own. He gives us the story of the fairies who were present at Arthur's birth, and of his voyage, when dying, to the Island of Avalon.

In the early part of the thirteenth century Walter Map, a chaplain of Henry II, blended with the Arthurian romances the story of the Holy Grail, thus giving us another legend, which has been used so beautifully by both Tennyson and Lowell.

Of all these compilations of Arthurian legends the one used most extensively by modern scholars is Sir Thomas Malory's *Morte d'Arthur*.

This book was completed in 1470. The author has used pre-existing material, but has given a fuller account of this wonderful king and his equally wonderful knights. Lancelot, Gawain, Gareth, Percivale, Galahad, and Tristram—all these are as familiar to us as are the names of the poets who have immortalized them.

From the songs of the old Welsh bards we may conclude that there was a Celtic prince named Arthur, who was king

of a tribe of Britons called Silures in South Wales, that he lived in the sixth century, and won renown among his countrymen by repelling the advance of the Picts and Scots from the North, and the Saxons from the East. He fought twelve battles against the Saxons, the last of which, Badon, was the most important.

"They sung how he himself at Badon bore that day,  
When at the glorious goal his British scepter lay;  
Two daies together how the battle strongly stood;  
Pendragon's worthie son who waded there in blood,  
Three hundred Saxons slew with his own valiant hand."

—*Drayton.*

Each new bard who sang of this brave warrior added something to the character of the historic Arthur, till he finally became an example of a perfect knight,—handsome, trustful, generous, tender in love, and courageous in war. This Arthur is the reputed son of Uther Pendragon and Ygerne, the widow of Garlois. Or perhaps we may prefer the more miraculous story of his birth said to have been told by the magician Merlin.

"And Merlin served about the King  
Uther before he died; and on the night  
When Uther in Tintagil past away  
Moaning and walling for an heir, the two  
Left the still King, and passing forth to breathe,

Beheld, so high upon the dreary deeps  
It seem'd in heaven, a ship, the shape thereof  
A dragon wing'd, and all from stem to stern  
Bright with a shining people on the decks,  
And gone as soon as seen. And then the two  
Dropt to a cove, and watched the great sea fall,  
Wave after wave, each mightier than the last,  
Till last, a ninth one, gathering half the deep  
And full of voices, slowly rose and plunged  
Roaring, and all the wave was in a flame.  
And down the wave and in the flame was borne  
A naked babe, and rode to Merlin's feet,  
Who stoopt and caught the babe, and cried, 'The King!  
Here is an heir for Uther!' And the fringe  
Of that great breaker, sweeping up the strand,

Lashed at the wizard as he spake the word,  
And all at once all round him rose in fire,  
So that the child and he were clothed in fire.  
And presently thereafter follow'd calm,  
Free sky and stars."

—The Coming of Arthur, *Tennyson*.

Soon after Arthur's advent into the world he is secretly taken by the magician Merlin and entrusted to the care of a friend of King Uther, Sir Hector, or Anton, as he is sometimes called. At the death of Uther the various lords struggle among themselves for supremacy, until Arthur, grown to manhood, proves himself king by drawing from a huge stone a sword which no one could move but he who was the lawful heir to the throne of Britain. His right to the crown having been thus miraculously proven, he began his long, eventful reign. He generally holds his court at

"Camelot, a city of shadowy palaces,  
And stately, rich in emblem and the work  
Of ancient kings who did their days in stone."

—Gareth and Lynette, *Tennyson*.

The building which first attracts our attention in this palatial city is

"The mighty hall  
Which Merlin built for Arthur long ago!  
For all the sacred mount of Camelot,  
And all the dim, rich city, roof by roof,  
• Tower after tower, spire beyond spire,  
By grove and garden, lawn and rushing brook,  
• Climbs to the mighty hall that Merlin built,  
Broader and higher than any in all the lands,  
Where twelve great windows blazon Arthur's wars,  
And all the light that falls upon the board  
Streams thro' the twelve great battles of our King.  
Nay, one there is, and at the eastern end,  
Wealthy with wondering lines of mount and mere,  
Where Arthur finds the brand, Excalibur."

—The Holy Grail, *Tennyson*.

This remarkable sword Excalibur was

"Wrought by the maiden of the lake,  
Nine years she wrought it, sitting in the deeps,  
Upon the hidden bases of the hills."

Tennyson, in *The Coming of Arthur*, tells us how

“The sword rose from out the bosom of the lake,  
And Arthur row'd across and took it; rich  
With jewels, elfin Urim, on the hilt,  
Bewildering heart and eye; the blade so bright  
That men are blinded by it; on one side,  
Graven in the oldest tongue of all this world,  
'Take me'; but turn the blade and ye shall see,  
And written in the speech ye speak yourself,  
'Cast me away!' And sad was Arthur's face  
Taking it, but old Merlin counselled him,  
'Take thou and strike! the time to cast away  
Is yet far off.' So this great brand the King  
Took, and by this will beat his foemen down.”

Thus Arthur is provided with a magic sword with which to conquer in time of war, and with a palatial residence in which to dwell in time of peace. But no home, no matter how mystically and mysteriously beautiful, is complete without the presence of woman. No knight, no matter how busily engaged in jousts and wars, can dispense with her sweet love and kindly encouragement; so King Arthur invites the beautiful Guinevere to share with him life's vicissitude and fortune. She was “the fairest of all flesh on earth,” the daughter of Leodogran, King of Cameliard. Arthur assists Leodogran in driving out the barbarians that harassed him, and in return wins for his wife the King's only daughter.

“Then Arthur charged his warrior whom he loved  
And honor'd most, Sir Lancelot, to ride forth  
And bring the Queen; and watched him from the gates;  
And Lancelot past away among the flowers  
(For then was latter April), and return'd  
Among the flowers, in May, with Guinevere.”

—*The Coming of Arthur, Tennyson.*

Thus in this spring of youth and hope and love the Queen enters the charmed walls of Camelot. One would think that so fair a woman must bring with her only joy and gladness, but it is she who introduces the cloud of sin which covers with its threatening blackness the sunny skies of Camelot until finally the storm breaks with fierce destruction upon the heads of all.

Leodogran sent with his daughter as a gift to Arthur the Table Round which had once belonged to Uther. Authorities differ in regard to the number of seats at the Round Table. The number has been put as low as thirteen (the number present at "the last supper"), but it is generally stated to have accommodated from one hundred and thirty to one hundred and fifty. One hundred of these knights were sent to Arthur's court by Leodogran. The other places were gradually filled as knights appeared worthy of them.

"The fellowship of the Table Round,  
Soe famous in those dayes,  
Whereatt a hundred noble knights  
And thirty sat alwayes,  
Who for their deeds and martiall feates,  
As bookes done yett record,  
Amongst all other nations  
Wer feared through the world."

—Legend of King Arthur. (Old Ballad.)

The Round Table was built by Merlin. By his magic power he had so constructed it that whenever a worthy knight was seated in his appropriate place his name immediately appeared on the table in letters of gold, thus proving to all his right to the great honor conferred upon him. For many years no one was found worthy to occupy a certain seat known as The Siege (Seat) Perilous. It could be filled only by one who was pure in life and thought.

"In our great hall there stood a vacant chair,  
Fashioned by Merlin before he past away  
And carven with strange figures; and in and out  
The figures, like a serpent, ran a scroll  
Of letters in a tongue no man could read,  
And Merlin called it The Siege Perilous.  
Perilous for good and ill; 'for there,' he said,  
'No man could sit but he should lose himself.'"

—The Holy Grail, *Tennyson*.

Finally Sir Galahad, "whose strength is as the strength of ten because his heart is pure," comes to Arthur's court and with safety sits in Merlin's chair because he realizes that only in losing himself in work for others can he find himself.



Arthur attracted to his court a great number of brave, noble knights, not only from his own small kingdom but from all the other realms round about him.

“A glorious company of the flower of men,  
To serve as models for the mighty world.”

Each of these knights was obliged to place his hand in his King's and swear

“To reverence the King as if he were  
Their conscience and their conscience as their King,  
To break the heathen and uphold the Christ,  
To ride abroad redressing human wrongs,  
To speak no slander, no, nor listen to it,  
To honor his own word as if his God's,  
To lead sweet lives in purest chastity,  
To love one maiden only, cleave to her,  
And worship her by years of noble deeds  
Until they won her.”

—Guinevere, *Tennyson*.

Foremost among this magnificent retinue was

“One Sir Lancelot du Lake,  
Who was approved well;  
He for his deeds and feats of armes  
All others did excell.”

—Sir Lancelot du Lake. (Old Ballad.)

Lancelot is the son of King Ban of Brittany. The unfortunate king, defeated by his enemies, flees to Arthur for aid, accompanied by his wife, Helen, and their infant son. Immediately after his flight their last stronghold is surrounded by the enemy. When he sees the flames of his burning home he falls to the ground, overcome by grief. His wife, leaving her child on the lake shore, hastens to his assistance, but in spite of her loving care he soon dies. Then

“She rose and looked, with tearless eyes but dim,  
In the babe's face the father still to see,  
And lo! the child was on another's knee.  
Another's lip had kissed it into sleep,  
And o'er that sleep another, watchful, smiled.  
The Fairy sat beside the lake's still deep  
And hushed with charmed charms the orphan child  
Scared at the mother's cry; as fleets a dream  
Both child and fairy melt into the stream.”

—King Arthur, *Bulwer Lytton*.

This nymph was Vivien, mistress of Merlin, better known as the Lady of the Lake. Lancelot received his appellation from having been educated at the court of the enchantress. When he is eighteen he is taken to the court of Arthur to receive the honor of knighthood. From this time on he plays a most important part in the history of this famous court. Though brave, courteous, generous, and kind-hearted, it is his sinful love for Guinevere which introduces the seeds of dissension and strife which finally develop the harvest of treason and rebellion that ends in the death of the King and the overthrow of this vast company of chivalrous men, the greatest the world has ever known.

King Arthur gave to no man so great a portion of love and confidence as he bestowed upon this brave knight. The friendship began early in the King's career when many doubted his right to the throne and even his royal birth. But in the war that ensued Lancelot stood loyally by his King. When the hard-fought battle had been won,

“ Arthur laughed upon his warrior whom he loved  
And honored most. ‘ Thou dost not doubt me King,  
So well thine arm hath wrought for me to-day.’  
‘ Sir and my liege,’ he cried, ‘ the fire of God  
Descends upon thee in the battlefield :  
I know thee for my King ! ’ Whereat the two,  
For each had warder either in the fight,  
Sware on the field of death a deathless love ;  
And Arthur said, ‘ Man’s word is God in man ;  
Let chance what will, I trust thee to the death.’ ”

—The Coming of Arthur, *Tennyson*.

It is this same friend whom Arthur sends to Camelot for his queen, Guinevere. Here begins the fatal friendship between the two which soon develops into something stronger and deeper. But Lancelot does not yield to this fatal love without a struggle. The conflict between loyalty to his King and love for the Queen drives him into spells of temporary insanity, during which he wanders aimlessly far from Camelot. Sooner or later he always recovers his normal state of mind and returns to the court, where he again immediately finds himself the favorite of all.

Inextricably interwoven with the story of Lancelot is the sadly sweet history of Elaine, "the lily maid of Astolat." Lancelot, going incognito to a tournament, loses his way and stops at the castle of Astolat, where he meets this fair maiden. Attracted by his gentle voice and courteous manner, she gives to him a love which he cannot return because of his guilty attachment to the Queen. Lancelot goes to the joust, accompanied by her brother Lavaine, and wins the last of the nine diamonds that had been offered as prizes in nine successive tournaments; but in so doing he is seriously wounded. Elaine, with her father's permission, nurses him back to life. When he is about to return to Arthur's court, she innocently confesses her love for him.

"Then suddenly and passionately she spoke:  
'I have gone mad. I love you; let me die.'  
'Ah, sister,' answered Lancelot, 'what is this?'  
And innocently extending her white arm,  
'Your love,' she said, 'your love,—to be your wife.  
And Lancelot answered, 'Had I chosen to wed,  
I had been wedded earlier, sweet Elaine;  
But now there never shall be wife of mine.'"

Then, in order to "break her love," at her father's suggestion he departed from the castle without bidding her farewell. Grieved at this discourtesy, the lily maid, "because of her great love," sickened; but ere she died she begged her father to clothe her, when dead, in her richest apparel, to place within her lifeless hand a letter which she had written to Lancelot, and then to have her remains taken in a boat to Camelot, no one accompanying her but an old dumb servant. All this the weeping father granted.

"So ten slow mornings past, and on the eleventh  
Her father laid the letter in her hand,  
And closed the hand upon it, and she died.  
But when the next sun brake from underground,  
Then, her two brethren slowly with bent brows  
Accompanying, the sad chariot-bier  
Past like a shadow thro' the field, that shone  
Full summer, to that stream whereon the barge,  
Pall'd all its length in blackest samite, lay.  
So those two brethren from the chariot took

And on the black decks laid her in her bed,  
Set in her hand a lily, o'er her hung  
The silken case with braided blazonings,  
And kissed her quiet brows, saying to her,  
'Sister, farewell forever.'

. . . . .

Slowly past the barge  
Whereon the lily maid of Astolat  
Lay smiling, like a star in the blackest night.  
And the barge  
On to the palace doorway sliding, paused.  
So Arthur bade the meek Sir Percivale  
And pure Sir Galahad to uplift the maid;  
And reverently they bore her to the hall.  
But Arthur spied the letter in her hand,  
Stooped, took, brake seal, and read it; this was all.  
'Most noble Lord, Sir Lancelot of the Lake,  
I, sometimes call'd the maid of Astolat,  
Come, for you left me taking no farewell,  
Hither, to take my last farewell of you.  
I loved you and my love had no return,  
And therefore my true love has been my death.  
And therefore to our Lady Guinevere,  
And to all other ladies I make moan.  
Pray for my soul, and yield me burial.'

. . . . .

So toward that shrine which then in all the realm  
Was richest, Arthur leading, slowly went  
The marshall'd Order of their Table Round,  
And Lancelot sad beyond his wont, to see  
The maiden buried, not as one unknown,  
Nor meanly, but with gorgeous obsequies,  
And mass, and rolling music, like a queen."

Founded upon this same episode is Tennyson's beautiful ballad, *The Lady of Shalott*.

(Continued in October EDUCATION.)

## *The Health Factor in its Social Aspect.*

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THE question arises in connection with the subject, Is there a virile or physical tendency present in affairs to the extent of being a visible impulse? And if there is, has it reached that point where it demands a consideration as such, or requires special measures? It cannot be assumed that the physical increment has been developed to such an extent as to be an absorbing influence, but there are abundant signs that it has become an important motive of action. Its effect, then, upon economics and ethical courses, whether applied to old standards or to the building of new ones, is well worthy of analysis, especially if the present period is as yet one of partial development only. What are the facts, then, as to the causes of this increase? Among the many should be mentioned, first, the advance in hygienic and sanitary science. In spite of the prevailing want of wisdom concerning things hygienic, it must be conceded that there has been developed a growing appreciation of the importance of the subject within the last few years. There has permeated the mass a partial acquiescence in the importance of these measures, and what is yet to be done only tends to bring out what has been done; and it must be conceded that thus far even a strong accession to our stock of physical energy and vitality has been made. The previously dormant sixth or health sense has been cultivated, and the more it is illuminated the more apparent is it that progress has been made. Athletics, physical culture, school hygiene, the demonstration of the germicidal causation of disease, and the spreading out among the public of what has hitherto been regarded as in the keeping of the physician and only to be thought of in time of actual sickness, the importance of preserving health, have brought about this uplift in things physical,

which must have its manifestation in some form of active energy. That view which ascribes many diseases to the presence of a specific bacillus, and finds the cure in the antitoxin treatment, is a valid ground for belief in the views just stated, because such treatment, first, by immunizing exposed persons, is in the line of prevention, and used after the onset of the disease is a specific cure, and greatly lessens mortality. The bacteriological treatment is in this way a direct agent of great utility in conserving the health force, and acts also by strengthening the confidence of the public in the realities of preventive medicine, which is shown in a willingness to adopt public and private means looking to the preservation of health. Every step toward the fountain head and origin of disease through this science is giving a strong and added impulse to the idea that health safety is best attained, not in the time of danger, but in the absence of it; and that it is better to fortify the health than to treat a manifestation of disease. It not only gives us the toxins but isolates and defines the special germ in the whole list of contagious diseases. Such investigation leads directly to accuracy in diagnosis and success in treatment, and is a growing aid to sanitation and preventive medicine.

The bacterial knowledge in reference to pulmonary tuberculosis, and accumulated evidence as to its infectiousness in connection with the establishment of institutions for the separation and special treatment of the disease, are important. The lessening of infant mortality through a more accurate knowledge of its cause by the same information, as well as a better method in the care and feeding in childhood life, constitute a marked contribution to the uplift. So, also, does the positive increase in the period of longevity and the greater number of those who live to a good old age. What sanitation has done in developing the health power is well shown by the graphic chart of the principal causes of death as issued by various Boards of Health, in which the ban designating common contagious diseases has undergone a constant shortening from year to year; while that denoting deaths from old age has lengthened until it has become one of the most prominent of the scheme, and has steadily mounted from the middle of the column toward

the top. The advance in athletics in its various phases, including physical culture, is a large factor in present day physiological attainment, both as an actual means of promoting the same and also by inducing and popularizing what may be called a health sentiment. Is there a high school or college in the land to-day of any repute that can afford to ignore their importance or neglect to make them a part of their curriculum? It is not expected that every member will join a foot-racing or ball team, but here is a powerful stimulus for every student to bestir himself in matters pertaining to his physical well being. And here as emphasizing the fact that health recreation is becoming a national trait, the extent to which athletic sports are patronized may be mentioned. The effect of the foregoing is twofold, as shown by an improved physical condition of the individual, and as well by a collective sentiment in the same line. Forcefulness or aggressiveness is one characteristic. What is the modern game of football but an exhibit of this. From the athletic field the young man goes out to the sphere of active life, strong physically, with a mind well nourished by a healthy organism. He who has pulled at a college boat race takes his brawn and muscle to do forceful work in the arena of business or professional life; and the onlooking thousands who have witnessed these physical tests catch the athletic spirit to carry it out to some extent in the affairs of active life. In the onrush of the football game, there is the same martial spirit that dominated in the charge up San Juan Hill. The man that grasps the oar to-day may to-morrow be the man behind the gun, or active in shaping a great financial deal in Wall Street, or the master spirit in the movements of a great corporation. Military athleticism is a prominent influence in national affairs in the present period of time, and as a term may be used to express the virile or physical component in that line of activity upon which we have entered in a relative degree. Our English friends early recognized the importance of municipal sanitation, as well as of health principles in private life, and rapidly advanced to that state of national health and vigor that developed the martial instinct which has been so fruitful in colonial acquisition. We in America, at a slower pace, bound by adverse

habits and environment as well as by bad cooking, and a restless activity leading to irregularity of life, have still advanced, till now we emulate their example in military acquirement in regions near or far; and it appears to be a manifest destiny for us to take our place among the world powers. Another tendency, in part virile or physical, is shown in the massing of capital in vast combinations unequaled in the past, and to such an extent as to become a business fad. The trust of to-day has its origin in part in the love of power, in the business world, which finds its analogue in love of conquest, in military matters. There goes with it a desire to make a particular combination the controlling power in its line in the business world, which is not satisfied until all rivals are absorbed by it. When, for instance, a corporation sets out to extend its control over the entire product in that business in which it is engaged, or when it goes outside of its own line, and attempts the same in reference to collateral industries, the impelling energy is not alone an exhibit of financial ability or foresight, but also of virile or physical unrest. The disposition to make a military hero for some feat of bravery solely which has resulted in success shows a tendency to exact the purely physical. Such a sentiment has become national. The widespread notice of a pugilistic encounter now so common is an exhibition of the same feature on a lower plane of thought. Wherever the virile element touches literature it inspires a more vigorous note.

Not all our writers, novelists, or poets are subjective illustrations of a perfect physical equilibrium, but the impress of the times is of necessity upon them and their productions. How else can we account for the great increase in the number of novelists and writers of a high order in other departments of literature? It may be said that increase of population is enough to account for the growing demand, but demand does not create ability to produce; it is, therefore, a reasonable conclusion that in consonance with the prevailing health movement there has also developed a physico-psychic force in literary production, and an increased appreciation of the recreative influence of novel reading on the part of the public. That the prevailing health factor is potent in affairs is apparent, and it is equally



plain that a suitable educative development should keep pace with it. The hygiene of brain cells is quite as important as that of muscle, and any economic consideration of the subject is incomplete without its recognition. That certain qualities are born in certain individuals to such an exaggerated degree as to constitute genius does not affect the force of the fact that mental and physical soundness and growth are intermingled in all the activities of life; and a saner view of the duties of citizenship is a natural result. The melodrama may abound in valiant deeds and gorgeous feats of daring, but not lead to anything uplifting. The flash novel may stimulate some of the forceful elements by its realistic portrayals, but its ultimate effect can be only evanescent. The vigorous wholesomeness of Longfellow or Kipling is to be desired above the panderings of Whitman. The novel, or poem, or picture, is symmetrical in its purpose and effect to the extent that the virile element is blended with a high moral purpose and an educated perceptiveness.

The young lady that practices golf, or tennis, or rowing, or any of the athletic diversions common with her sex for the purpose of developing her muscularity mainly, and to make herself an adept in masculine feats, fails to recognize them as aids to that higher culture or charm which so much adorns womanliness, as well as that fine intellectuality that adds adornment to her combined mechanism. While it may be necessary for the present to maintain an enlarged army and to develop our new navy, which is a natural sequence of national vigor, the peace principles enunciated by the conference at the Hague are indicative of a saner equilibrium, by which the resort to arms is superseded by a virile but human mentality; and it is to be hoped that the time may come when the millions spent in war preparations may be utilized in industrial pursuits and the development of natural resources. There should grow also a commensurate demand for a revision of old educational standards, and the building up of better ones adapted to the needs of the day. We should educate the young to realize that devotion to party in politics is right according to convictions; but as well, that party devotion is not a criterion for fitness for office,

that success in winning votes does not make a man a valuable counselor in public affairs, and that when a man is elected to office he is not the servant of a party, with an eye single to the policy of that party, but essentially the servant of all. If our senators and representatives in Congress could learn these basic truths, public legislation would be greatly expedited, and public policy more nearly ideal. No matter of vital welfare should be settled on party lines, but such differences should be sunk in a zeal for the common good. A higher standard of business ethics is another requisite that should be fully taught. The strained relations between employer and employee, too often engendered by a lack of appreciation of business fairness and rectitude, and as well between corporations and individuals, now resulting in strikes and arbitrary acts, would be done away with if such an educated course could be attained, and without the least detracting from the valid rights to dictate by employers as to who shall be employed and on what conditions. A better knowledge of sound economic honor on their part, and on the part of the intelligent element of the employed and their leaders, would do much to adjust present conflicting relations and interests; strikes and lockouts would be made untenable as a method of settling disputes. If we are to live in a "strenuous" and expansive way, the citizen must be educated so that he can safely step into the new domain and be fitted to occupy it to the best advantage. So far as health becomes a national tendency must there develop a realizing sense of the responsibility that resides in the possession of power, the duty to cultivate fine ideals, and to investigate the causes and course of national prosperity. A good citizen must be a forceful unit, but one in whom vigor and power are well restrained and directed by an educated judgment.

Such composite types of manhood are to be desired that combine the iron and blood of a Bismarck, with the broad liberality and fine sense of justice in a Gladstone, the religious nobility of a Cromwell, united with the catholicity of a Beecher, and added the high reform ideas of a Roosevelt.

## *Impressions of the N. E. A. Convention for 1903.*

CHARLES CORNELL RAMSAY, BOSTON, MASS.



It is scarcely necessary to say that no one attendant could form, much less express, just and adequate views of the largest convention of teachers which has ever been held in the world. It was too big and too complex for even a committee of expert observers to assess its value to individuals and communities. Nevertheless, it may be useful to record a few of the impressions of a single member, together with the informal opinions of others expressed at random here and there in hotel lobbies and corridors.

The Boston meeting of the N. E. A. was truly a mammoth gathering, over thirty-six thousand persons having registered and paid their fees at headquarters. It was perhaps the largest convention of educated men and women of any in the history of American intellectual life. Never has any assembly of teachers before met which, by reason of its location and environment, and the high character of its exercises, officers, and chief participants, been so well calculated to impress the imagination, thrill the heart, deepen the sympathies, and broaden the knowledge of its attendants. Poor and miserable, indeed, is the soul of the teacher whose physical and intellectual and moral pulse was not quickened by this great meeting. It was an admirable illustration, on a smaller scale, of the vast dimensions and numberless ramifications of human knowledge, thought, and action in the larger world; and it must have been a convincing proof of the value and necessity of the elective principle in education even to the most slavish devotee of the traditional prescribed course of study, since no one person could possibly attend or profit by more than a small fraction of its exercises.

It would be impossible to comprehend the enormous and faithful labors of the hundreds of persons who contributed to the success of the Convention, and to do justice to the skill,

ability, resourcefulness, and gracious courtesy with which President Eliot, his capable and devoted official associates, and the great city of Boston handled the unprecedented crowd, and attended to the minutest details of the meeting. Certainly, they excelled even their own splendid record of wisdom and hospitality, and their praises were constantly in the mouths of visitors from Maine to California, from Michigan to Texas, and from New York to Florida. Never has there been set for a democratic gathering a higher standard of manners or morals. The refinements and amenities of true culture were everywhere manifest. Opportunities for mental and moral expansion, for historical and literary inspiration, and for the highest social and intellectual pleasures were never so abundant. There is no doubt, moreover, that the Convention was as much a beneficial object lesson to Boston and New England, as Boston and New England were to the attendants from other sections of the country. Our citizens were most agreeably impressed by the personal appearance, fine behavior, and high grade of intelligence of that portion of the vast army of American teachers who were in attendance. Aside from the hot weather of convention week, the one regret was that every teacher and school officer in the land were not present. Though the enrollment was so large, many far and near who should have been there stayed away. For many years past the writer, in an official capacity, annually urged the teaching staff in a large city within sixty miles of Boston to attend the National Educational Association. Their excuse for absence uniformly was that it was held too far away; but when this year the meeting was in Boston, their excuse for staying at home was that it was too near. Of this staff less than a dozen were present, including but two members of the school committee, who attended but one or two days. Alas, what can be done when the heart is dead and the will paralyzed? If the habitual absentees, who are not infrequently distressingly narrow-minded, provincial, and prejudiced, could but appreciate their opportunity to attain breadth of view and more intelligent opinions by contact with large numbers of the best people and by listening to inspiring and instructive addresses at N. E. A. Conventions, they would

count few sacrifices too great to make that they might attend. Often the papers with which one most disagrees are the most helpful. Every intelligent, able, and worthy teacher desires familiarity with every form and phase of educational opinion and activity. Moreover, it is absolutely essential that every teacher shall be lifted above and beyond the fatal routine of his every-day life and environment by the contemplation of the largest themes, by the most impressive units of thought and feeling, and by personal acquaintance with the greater men and women who are molding professional opinion and heading advanced educational movements.

Let us now come a little closer to the Convention itself. Often the most interesting and instructive features of a Convention are the conversations between the sessions, wherein one learns the mental reactions of able men after they have heard some of the addresses and papers announced on the program. "What do you think," said one gentleman in my hearing to the head of one of the best academies in the country, "of Stanley Hall's educational propaganda and influence?" The rather inelegant answer was, "His views are all 'Tommy Rot.' They are sentimental vagaries which are a menace to all sound and substantial education. He indoctrinates a lot of school superintendents and professors of pedagogy in colleges and normal schools, who in turn shape courses of study and influence the rank and file of teachers, to the detriment of thousands of American pupils. Dr. Hall's influence, conjoined with that of President Eliot and his elective system, has done untold injury to sound mental discipline in the schools. Why, sir, even conservative Yale will now graduate a young man without a knowledge of geometry. It is absurd and disgraceful. What are we coming to? Put a boy through a Stanley Hall or a John Dewey course of study, and what will he know? He can't 'stand fire' in geometry or Latin, the elements of which every schoolboy and schoolgirl should be compelled to master." Another of this group said, "Stanley Hall and John Dewey ought to be shut up in an iron cage with Lady H. J. Bok, and kept from doing farther harm to American schools." Another remarked that this "sentimental gush and bosh" would soon run its course, and common sense

would reassert itself. A fourth gentleman said, "I beg your pardon, my friends. There is much sound sense and enduring truth in the doctrines of Stanley Hall and John Dewey. Let us no longer be slaves to tradition; let us save the boys, and keep them longer in school by more rational and reasonable treatment; let us protect the girls by a more discriminating course of study, better adapted to their nature and needs; in short, let us more intelligently study human nature and practical life, and fit the school to our youth rather than our youth to the school."

In my hearing the question was also asked, "What do you think of Margaret Haley and her federation movement?" The answer was, "I think that if she makes one or two more such exhibitions of her aims and animus as she has made here, she will hopelessly fall from the pinnacle of her ambition and conceit. Give her enough rope, and she will hang herself and ruin her cause all right." Said another, "Her demagoguery was clearly proved by her effort to prove that Presidents Eliot and Butler intentionally tried to discriminate against women, when such was the farthest from their thoughts. While, inadvertently, President Butler's proposed amendment to the constitution of the N. E. A. was less democratic than the present clause, which gives the appointment of members of the nominating committee to the active members from the several states; and though I would not have voted for the proposed amendment, whose only purpose was to secure a complete committee on nominations and expedite business; yet Miss Haley, by confusing the issues involved with 'woman's rights,' enjoys a brief personal triumph in the daily press reports of chivalrous newspaper men." "If she herself be so broad and democratic in spirit," said another, "why does she not include her federation principals, superintendents, and high school teachers instead of confining its membership to grade teachers?" Said a fourth, "The war of races in the United States is not between blacks and whites, but between the Latin and Anglo-Saxon civilizations; between the ideals of authority and organization against freedom and individuality; between Rome and Plymouth Rock. Miss Haley represents the former, and her following will finally be only

those who favor the Latin ideal." A fifth gentleman answered: "I think that you are going far afield for an explanation of Miss Haley and her movement. I believe that she is unconscious of any such ideal or motive. She seems to me to be actuated by the worthy desire of elevating our profession; by securing to the rank and file of teachers the dignity and influence of higher salaries."

"The topic which you have just now been discussing," said a gentleman from Massachusetts to a gentleman from Colorado, "naturally leads me to ask how woman suffrage works in your state?" The latter answered: "It has proved no blessing, within the limits of my observation. Certainly, many of the women I know on school boards are the worst demagogues on the board." "Which exactly coincides," said the inquirer, "with my observation in Massachusetts. Several women on school committees I have known were the worst politicians and all round wire-workers connected with their respective committees. They are often hysterically impulsive, and eagerly engage in personal politics." These remarks led another to say, "Women seem naturally to live in a *personal* atmosphere, and often appear unable or unwilling to look at a question from an impersonal point of view." When a lady approved what had been said about both Miss Haley and woman suffrage, remarking that these movements did not represent the most thoughtful women, a gentleman said: "Time and experience will improve women in public service. Andrew Jackson lived in a 'personal' atmosphere; and there are already a considerable number of women possessing philosophic minds, with their emotions well under control."

Some of the addresses which attracted most attention were President Eliot's on a new definition of the cultivated man, his address and that of President Butler on the shortening of the baccalaureate course, Bishop Thomas F. Gailor's on the need of greater attention by universities to the morals and manners of their students, Professor L. H. Bailey's on the nature-study movement, Henry L. Clapp's on school gardens, the Rev. Charles T. Walker's on negro education in the South, and President Hall's on sex in education.

The keynotes of the Convention seemed to be that interest and pleasure in pupils' minds should be inseparably connected with school studies and occupations; hence, that there should be freedom of choice among studies as early as the seventh year of school life; that time should be economized by shortening the course of study from the kindergarten through the university; that more boys must be induced to stay in the high school and go to college or technical school; that girls should be educated with greater reference to their peculiar needs and nature; that educational progress largely depends upon women—but as mothers rather than as teachers; that a new and broader definition of culture should be formulated; that teachers' salaries should be increased throughout the country; and that negroes and Indians should be thoroughly educated—most of them industrially, and some of them professionally.

It is interesting to note that, notwithstanding the unusual attractions outside the convention halls, the attendance at every session in all departments was very large. Indeed, at many meetings, not only was every seat filled, but also every foot of floor space was occupied by persons sitting on the carpet.

Finally, it must be said, that several unique circumstances combined to make the N. E. A. Convention in 1903 the most remarkable in the history of the Association, and probably greater than any of its future meetings, at least for many years. It is hardly necessary to mention the chief of these unusually favorable conditions: the distinguished presiding officer, President Eliot, whose name is a household word wherever progress and culture are appreciated; the place of meeting, Boston, with its historic landmarks and literary shrines; proximity to Cambridge, with its ancient university; nearness to Salem, Plymouth, Lexington, and Concord, and other scenes of colonial and Revolutionary events inseparably connected with American history and literature; and the series of receptions in the homes of old families and famous institutions.



*Editorial.*

BOSTON, and New England generally, may well be congratulated upon the success of the recent meeting of the N. E. A. It was a great gathering, and notable in many ways. It was enormous in point of registration. It was notable in the well arranged and well executed programs. It was noticeable among meetings of this body, for the large attendance at the several sessions of the different sections. Boston did herself proud in the amount of money raised for local administration and entertainment; for the facility with which the business of the organization was carried on, and for the completeness of messenger, guide, and information service, at the meeting places and throughout the city.

Boston and the official management of the N. E. A. deserve the thanks of the teaching profession throughout the country. It has set a high standard by which to measure future meetings. But certainly to no other one man is the great success of the meeting due as to President Eliot. His touch was apparent in every important proceeding. It followed a master mind. His addresses were models of fine speech and courageous thought. As presiding officer of the large meetings he was ideal. As genial host he will be lovingly remembered by thousands who saw and met him for the first time. President Eliot's meeting of the N. E. A. will go down in American educational history as a notable and profitable session.

Next to the meetings in profit to teachers, far more than the meetings in many cases, were the visits of Western school people to points of historic interest in and near Boston. Never did any body of teachers so use their one available week, and never was Boston so used, perhaps, as during this week of July 6 to 13, 1903. There were few teachers who did not see something each day besides the meetings; and there are few places of real historical interest that altogether escaped visitors during these days.

It was a time of pilgrimages, and manly resolves, and patriotic fervor, and schoolmaster devotion. Not New England and colonial history alone will be taught with better spirit this new school year, but all history, as the new view has found the universal element in social institutions. Not the Revolution only, but the Civil War, and the great Western frontier, and the inland trade, and the industrial problems of a nation, will be seen to have larger meanings, and to

concern the whole people. These thousands of teachers cannot quite return to mere lesson hearing and the making of perfunctory charts of historic dates and names. The N. E. A. of 1903 afforded a means of liberalizing education to thousands of teachers who saw the East for the first time.

**T**HE summer just closed has been a notable one for teachers in many ways. The short terms of schools, for review, academic and professional studies have everywhere been crowded. The session at Harvard has had nearly twice the usual enrollment. Chautauqua, and Martha's Vineyard, and Knoxville, and Nashville, and Chicago, and Denver, and Omaha, have all been full to their several capacities.

Thousands of teachers have had from two to six weeks of more or less serious study. And it is well. Of the ten to twelve weeks of vacation, no teacher will be the worse now for having spent one fourth to one half the time in real work. The colleges, and special schools, and summer Chautauquas, and private classes, have themselves reaped a rich harvest, and done an incalculable good to teachers. It offers great encouragement for the year to know that because of these many schools, and the Boston outing and foreign travel, thousands of children will have instruction that is all the better because it is fresh and at first hand.

It is encouraging in another respect, also, this large summer school attendance. The colleges and universities are doing both teachers and students, and themselves, a commendable service in opening their classrooms and laboratories and libraries to this freer use by a hungering public.

In this respect the last ten years mark a comparatively new era among these higher institutions. Their equipments are made more generally available, the learning of their faculties, their facilities for research, the atmosphere of culture, and the stimulus to study. Because of these privileges thousands are drawn into the student habit, teachers become more scholarly, the uses of the laboratory and the library are brought to many who do not reach the lecture and classroom of the college.

Such schools dignify real learning. The mushroom schools of a generation ago have less and less repute, as the real work of the colleges becomes known. It pays to make the best work of the schools familiar to the rank and file of teachers and students. To some, of mediocre ability, it will be found to be only veneer; but to many it will be real inspiration for better things. The colleges which use their

rich equipments for longer terms are doing themselves a service by increasing their patronage, and enriching the work of the lower schools through the hundreds of aspiring teachers.

**F**EW educational topics are more "in the air" at present than those which concern the shortening of the courses of school study. With twelve years given to the elementary and secondary studies, and four years to the college course, the period seems long in preparation for professional studies. The problem is not by any means as simple as at first appears. More than five out of six pupils who reach the high school stop short of any pretense at professional training, and most of them fail to reach the college. Indeed, in most cities, the serious question is one which concerns the thousands who do not complete even a high school course. What shortening or lengthening of the course is required in the interest of these?

Without entering upon any extended argument for or against the shortening of the college course, the editorial venture is submitted here that the college course is none too long as it is, and for those who attempt it.

Were the elementary course reduced to seven years, and the high school so constituted that the stronger pupils might finish it in three or three and a half years, the four years of the college course could yet be taken, and the professional studies be begun by the time the student is about twenty years of age.

Much time is wasted in the later elementary grades. Nowhere else in the school course is there such danger from habits of dawdling as during the period from ten to fifteen years of age. Attention during these years to the fundamentals in education, hard work for short hours, and sensible teaching, would accomplish far more in seven, or even six years, than many schools now do in eight years.

The later years of the secondary school, and the entire period of the college, stand for a certain breadth of discipline and the culture side of life's problems that this industrial age can ill afford to lose. These later years prepare the leaders in great public interests,—in the professions, in commerce and industry, in finance and invention; and the college and university must put the catholicity of their training as leaders, beyond the peradventure of narrowness or veneer, or mere show, or even unreflecting skill. Save to the college its full time. Covet better instruction in the grades that will make possible a reduction in the years before college, and save the high school to many who do not now reach its classes.

ONE of the most interesting movements of the day in school and other educational affairs is that for a training having a distinct civic purpose. In many states and radiating from a few important centers, the influence is gaining in both force and purposefulness.

The various forms of village and home improvement societies; clubs among youth and adults to encourage the growth and care of trees and flowers; women's clubs having civic interests; organized concern in municipal affairs; the institutional church and the socialized pulpit; public interest in and intelligent study of great economic and social problems; movements among interested parties for the improvement of factory conditions; numerous citizens' parties and efforts to purify the ballot; compulsory school attendance laws and the regulation of child labor; the free platform and press discussion of public economic and civic programs; art and park improvement societies in cities; vacation schools and playgrounds; evening classes for the day employed; free public lectures for adults on current and scientific problems; freer access of all classes to libraries, art galleries, museums, parks and improving collections; the utilization of vacant lands in cities and their nearby suburbs; the extension of free mail deliveries; more intelligent landscape gardening in open places; more systematic efforts to introduce and preserve an attractive and wholesome cleanliness in cities; the lessening of the smoke menace in manufacturing cities; protests and legislation against obnoxious bill boards along or in view of highways; the employment of fine art decorations in schools and public halls, along the highways, and in open parks; the terracing and ornamentation of unsightly hillsides and river and lake fronts; the construction of artificial lakes when natural bodies of water are wanting; the establishment of public drinking fountains; the preservation of natural picturesque features; the care in supplying abundant and pure water; better systems of sewerage and general sanitation; safe disposal of garbage and waste; various forms of school extension; the arts and crafts societies; various efforts at rural improvement, are some of the better developed movements for civic improvement.

It is a great day, and the time seems to be ripe for schools to do far more than has yet been done elsewhere than in a few experimental centers, to organize the interest as a means of educating the youth. Whatever other purposes the school maintains, it should look to fitting the youth for the best possible citizenship.

PROGRAMS of association meetings and recent institutes, lectures, and personal conferences during the vacation now closing, emphasize the very general interest shown by school men in the educational uses of thinking that involves doing. The term manual training must greatly increase its content, if it is to serve to compass the current thought on constructive exercises, or a new term must be found. Many years ago Whittier wrote,—

“No task is ill where hand and brain  
And skill and strength have equal gain,”

and those who have to do with directed education are interested to discover the sequence of school tasks that shall best accomplish this purpose. Whether it shall be child work at primitive industries, the making of things mentioned or suggested by other lessons, and the general reading, the following of an arbitrary series of formal constructive exercises using the several plastic materials, or the voluntary performances of children with raw materials, stimulated by the wise teacher who adds skill to knowledge, most teachers now agree that, more or less regularly, as a part of every day's work, each child should carry into concrete uses the knowledge he has acquired. Only so is an experience completed, rounded out. Knowledge becomes his only who has used it, lived it, concreted it in conduct or service. Work with tools, few or many, and work that employs no tool but the hand and such instruments as the hand extemporizes; the uses of the senses in original observation, heading their own voyage of discovery; guiding behavior through individual purpose; whatever self-initiative that adjusts means to self-appointed ends, partakes of the nature of the only constructive work that seems to be much worth while. Manual training as usually understood is much, but not all. Sloyd has its value. But both of them, and the scores of similar and related hand exercises more or less common in the better schools, are phases only of the movement that requires the addition of doing as the complement of thinking,—resourceful, interested, self-directed doing to round out interested thinking.

The program of the recent meeting of the N. E. A. was rich in every department in suggestion of the serviceableness of such principle.

### *Foreign Notes.*

#### RESIGNATION OF MR. SADLER.

The resignation of Mr. Sadler from the position of Director of Special Inquiries and Reports is one of the surprises growing out of the reorganization of the English Education Department. His action was occasioned by a difference of opinion between himself and the new President of the Department or Board of Education as to the extent of the authority of the latter over the work and duties of the Director. The narrow interpretation put upon the language of the official order creating the division by the new chief is in striking contrast with the liberal conception under which Mr. Sadler had conducted those international researches, whose results have been of intense interest and of inestimable value to the whole educational world.

Soon after his resignation Mr. Sadler was engaged by the Sheffield Education Committee to report upon the provision for education above the elementary grade in that city, a work of great importance, well worthy of his remarkable powers. His acceptance of the chair of Education in Manchester University has been recently announced.

#### THE LONDON BILL.

The education bill for London has passed to the third reading in the House of Lords, and is practically the law of the land. Virtually it amounts to little more than the extension of the law of 1902 to London, which was not included in that measure. During its passage through Parliament the bill has been modified to the loss of its most objectionable features, but it still excites intense opposition. The most important change effected during the debate relates to the constitution of the education committee. It will be remembered that the law of 1902 made the county and city (county-borough) councils the local authorities for education; but these councils manage the school affairs through education committees. The peculiar character of the metropolitan area necessitated special considerations. The name London pertained formerly to the *city*, which has an area of a little more than one square mile. The outside districts grew up without any homogeneity and without a common name until 1855, when they became officially known as the "metropolis" (Metropolis Management Act of 1855). The entire area became the administrative

county of London by a law of 1889. Within this area are comprised twenty-eight boroughs which were formerly under the control of a complicated network of parochial and ecclesiastical bodies which, after many efforts to simplify local administration, were at last replaced by metropolitan borough councils. These bodies have large independent powers, and the question of their prerogatives naturally arose in connection with the proposed school law. It should be added that the members of the borough councils are elected, but for obvious reasons they are much more subject to traditional influences than the members of the county council. With these particulars in mind one can understand the significance of the principal change which the opposition secured during the passage of the new school law. As originally drawn, it was provided that more than half the members of the education committee, which as already stated is charged with the direct control of the schools, should be appointed independently of the county council. Thirty-one members out of the total ninety-two were to be members of the borough councils and appointed by them. These provisions, it will be seen, reduced the authority of the county council to a mere pretence. The scheme was received as a direct blow to popular control of the most vital interest of the common people, and it raised such a storm of indignation that the government finally abandoned the effort to hedge in the county council, and left it free control of the field. As the bill now stands, the boroughs must not only receive their powers by delegation from the county council, but it is expressly provided that they shall exercise these powers through properly constituted committees. The appointment of women upon these committees is made mandatory, which is an impressive tribute to the eminent service rendered by women on the London Board. By the terms of the law, that historic body—the greatest educational parliament in the world—will close its active existence on the 31st of March, 1904.

#### THE SITUATION IN FRANCE.

While recent legislation in England gives distinct advantage to church schools, France has entered upon a course of uncompromising opposition to sectarian influences in national education. When the law subjecting the religious orders to the civic authority was passed it was supposed that those orders seeking the sanction of the government would be met in a spirit of toleration, but other councils have prevailed. The application of several teaching brotherhoods for recognition under

due forms of law was met by a measure refusing all sanctions of the kind to the religious orders for men, and this has been followed by a similar vote in the Chamber of Deputies respecting the teaching sisterhoods. This sweeping measure seems fraught with dire consequences for the social peace of France, and meanwhile thousands of children are deprived of the only means of instruction and nurture which their parents can tolerate. The state will be obliged to make provision for about one fourth of its school children in public schools, which they have been taught to despise. To the American observer, accustomed to the utmost freedom of choice with respect to the means of education, the condition in France seems unfortunate in the extreme. But in fairness one should endeavor to understand the situation from the government point of view. "Liberty of instruction" was the policy pursued up to the passage of the law respecting the associations. This liberty, it is asserted, has been abused by the teaching orders. Says a government official in a recent report, "While we have seen in the 'liberty of teaching' a means of hastening the intellectual development of the masses, the associations have regarded it as a means of keeping them still in a state of relative ignorance." This is not indeed the most serious complaint, for it is affirmed further that in their secondary schools the clerical teachers have instilled into the minds of their pupils sentiments adverse to the republic. These charges are vehemently denied, but the government persists in the conviction of their truth.

#### A TECHNOLOGICAL INSTITUTE FOR LONDON.

A movement is on foot under the distinguished auspices of Lord Rosebery to establish in London an institute for advanced technological instruction. An offer of land, buildings, and equipment to the amount of \$2,500,000 has been made with a promise of additional funds provided that the London County Council will pledge the sum of \$100,000 annually toward the maintenance of the work. The council has signified its willingness to contribute the amount named, but expresses further the opinion that the general government should be urged to make appropriation for the same purpose.

#### INFLUENCE OF GERMAN PRECEDENTS.

The movement thus happily begun has been prompted in great measure by the example of Germany, whose liberal support to and high recognition of the importance of technical education is the most



impressive fact in the educational activity of Europe. Interest in the elaborate provision made by the German states for this new department of higher education has been exacted in government circles in Great Britain by a series of reports on the subject by her foreign consuls, and in particular by the very able reports of Dr. Frederick Rose, consul at Stuttgart. In a recent report on the "German Technical High Schools" (not high schools in the American sense, since they are of university rank), Dr. Rose states that the appropriation from the Prussian treasury to the Berlin technical school, which in 1871 was \$42,555, amounted in 1899 to \$168,375. In the latter year the total grant to the three "technical high schools" of Prussia amounted to \$326,750. Besides this amount grants were allowed for extraordinary expenditures, raising the grand total received from the state in 1899 to \$606,740.

Dr. Rose notes, also, that the attendance upon the "technical high schools" is increasing much more rapidly than that upon the universities. The figures given are as follows: attendance upon the universities in 1870, 13,674 students; in 1900, 32,834; upon the "technical high schools," in 1870, 2,928 students; in 1900, 10,412.

A. T. S.

## Book Notices.

NOTE.—The number of books now published monthly is so large that we shall hereafter adopt the plan of promptly acknowledging by title, author, publisher and price, all books sent us for review; and later, as space is available, give more extended notice to such as seem most likely to be of interest and value to our readers.—*Publishers' EDUCATION.*

**New School Arithmetics.** By John H. Walsh, Associate Superintendent of schools, the city of New York. Boston: D. C. Heath & Co. In the schools arithmetic is universally taught; whatever branches of a curriculum may be omitted arithmetic is never left out. Its purpose in the elementary schools is pretty well defined by school officers and teachers, that is, its usefulness; as a result it is taught as the art of mechanical computation only. But herein is there lost the better part of the study; that is, its value for its culture, for its training in logic. In most arithmetical text-books the one aim is to train students to become mechanical puppets, to be able to juggle in numbers, to be clever in computation. The ordinary teacher is rarely superior to the text-book in her hands, and if the book is to train to number computation only, the result will be that the pupils will be thus trained. But if the book happily demands that the subject be considered from its culture value also, then will the learner be trained into clearer habits of thought, and arithmetic will have its rightful value in the development of youths. In this series by Superintendent Walsh there are three books: one for the pupils of the second, third, and fourth years; the second book for the fifth and sixth years; and the third book for the remaining years of the grammar grade. In these books the author has achieved the *ultima thule* of working text-books in arithmetic. Casting aside tradition he has boldly met the needs of the children, and not necessarily the demands of teachers. The time has happily passed when intricate processes, elaborate theories, voluminous rules, and enigmatical problems can make the sum total of the contents of a text-book in arithmetic; the demand to-day is for a text-book that will disengage the student from memorizing rules and set him rather to thinking, to depend on reason more than on memory in his arithmetical work. It is along this line that Superintendent Walsh has made his books. In them there are no rules, and the definitions are so few and so concise that they appeal directly to the attention and intelligence of the student. In the matter of problems the books are unsurpassed. In their arrangement there is demonstrated the wisdom of years of experience in the schoolroom. In number they are multitude, and they are new, clever, bright, interesting, and altogether possible; all are within the comprehension of the learner, all are wisely graded, all are practical. Reviews are constant and persistent; they are a striking feature of the series. A pretty careful examination of the series serves to fix the conviction that here is a set of text-books in arithmetic that is practical, sensible, usable, unique; a series that meets the demands of the day, of the teacher, and of the student; a series that will go far to render impotent the criticism of business men that the graduates of the grammar schools are not able to make accurate and logical use of their number faculty.

**History of Western Europe, Part I,** by James Harvey Robinson, appeared last autumn, and was at once recognized as a scholarly and satisfying

treatment of its subject. The complete work now appears in a handsome, comprehensive volume, which leaves little to be desired whether as a text-book or a work of reference. Boston: Ginn & Co. Price, \$1.50.

**Outlines, Suggestions and References in Commercial Geography.** By George W. Sanford. A systematic and comprehensive arrangement of topics in outline for extensive and intensive study, with a few choice illustrations, many helpful suggestions and references to authoritative works, and many outline maps to be filled with details by the student, the whole interleaved with blank paper and bound in loose, portfolio style. It is a companion work to the "Outlines of the History of Commerce" by the same author, and is equally excellent and helpful,—especially to normal students, teachers, and specialists. Chicago and New York: Powers & Lyons. Price, 80 cents.

**The Teaching of Mathematics in the Higher Schools of Prussia.** By J. W. A. Young, Ph.D. A general sketch of the Prussian higher-school system, with a particular description of the work done in mathematics. It is the result of nearly a year of personal investigation and study, and gives a detailed statement of courses and methods, which will be a real help to the live teacher and to the special student of education. New York: Longmans, Green & Co. Price, 80 cents.

**Eskimo Stories.** By Mary E. E. Smith, and illustrated by Howard V. Brown. A fascinating book for youngest readers. The stories are drawn from authentic sources, and largely from material gathered in recent polar explorations. The illustrations are artistic and appeal strongly to the desire of children for a wider acquaintance with the ways and lives of other children, and with things strange but true. Such a book does much to provoke to good reading. Chicago: Rand, McNally & Co. Price, 40 cents.

**Real Things in Nature.** A Reading Book of Science for American Boys and Girls. By Edward S. Holden, Sc.D., LL.D. Intended to meet the wants of youth at the age when questions abound, when the mind is open to direction, and when habits of thought are being formed. Therefore, the book aims to teach ideas as well as to state facts. Fundamental ideas and scientific method are its strong points. It treats of astronomy, physics, meteorology, chemistry, geology, zoology, botany, the human body, and the early history of mankind in a way that makes it a valuable supplement to the regular instruction. It is a grand book for every grammar school. New York: The Macmillan Company.

**Pipes of Pan.** No. II. From the Green Book of the Bards. By Bliss Carman. The author has delightfully caught the spirit of the woods and fields. His verses are sentient with physical, animal life,—sensuous life. The present is all that he is sure of, though he feels the vague longings of the soul for a continued existence; and this comes out in a minor key throughout the book. Boston: L. C. Page & Co.

**School Composition.** For use in Higher Grammar Classes. By William H. Maxwell, M.A., Ph.D., LL.D., and Emma L. Johnston, A.B. One of Maxwell's English Series. The general scheme of the book is inductive, and a prominent feature is training in the art of deriving and following synoptic outlines. Study

begins with a simple analysis and imitation of model selections and progresses carefully through Description, Narration and Exposition. The book is purely constructive and wastes no space upon faulty examples. Material is sought in the field of the pupil's interests, and thus the attention is easily held and the instruction made effective. It is as good a book as has yet appeared, but will make large demands upon the teacher. New York: American Book Company. Price, 50 cents.

**Pitman's Shorthand Instructor.** By Charles T. Platt. A good manual for the explanation of nearly every principle of stenography, but lacking the index necessary for ready reference. It is full, explicit, systematic and progressive, and should prove to be a most excellent drill book; for it abounds in technicalities, tests, cautions and quizzes, with many exercises for practice. The system presented is essentially that of Benn Pitman, with an attempt to make it less purely mechanical and more evidently scientific. The work will be a valuable aid to the professional stenographer and the teacher as well as to the thorough-going student. New York: American Book Company. Price, \$1.20.

**Stories of Old France.** By Leila Webster Pitman. A series of eight eventful stories of royalty with brief historical interludes, and embracing the period from Charles VII to the beginning of the French Revolution. The various grades of society from peasant to noble are clearly depicted. The stories are truthfully told in a graphic, stirring manner, and are well suited to impress young people in upper grammar and high schools. New York: American Book Company. Price, 60 cents.

**Advanced Algebra for Colleges and Schools.** By William J. Milne, Ph.D., LL.D. Practically an extension of the author's Academic Algebra, in order to meet the requirements of students in preparing for the entrance examinations of scientific and technical schools, or for the "Advanced Algebra" examination offered by many colleges and universities. Over 160 pages of new matter have been added to the elementary work. Thus the book presents a complete course in Algebra. The treatment is clear, full, and sufficiently rigorous. New York: American Book Company. Price, \$1.50.

**Some Useful Animals,** and what they do for us. By John Monteith, M.A., and Caroline Monteith. A supplementary reader for second and third years, intended to assist in nature study, and also to aid the natural method of learning to read. It presents an entertaining account of many animals and animal products, and gives much information of special interest to children living in cities. New York: American Book Company. Price, 50 cents.

An encouraging increase of interest is shown in the study and reading of history, and especially American history, as an instrument of education. The last years have added a number of wholesome books for children and youth, looking to the cultivation of a history and civic sense.

Among the best of these is a recent one, "The Romance of the Civil War," volume four in the series of Source Readers in American History, edited by Albert Bushnell Hart, of Harvard. The earlier issues comprise "Colonial Children," "Camps and Firesides of the Revolution," and "How Our Grandfathers Lived."

"The Romance of the Civil War" shows a wealth of material that is admirably selected and well arranged. In eight chapters, including, On the Plantation, The Underground Railroad, In and Out of the Army, Boy Soldiers and Sailors, In Camp and on the March, Under Fire, On Deck, and Women in the War, the story of a generation of slavery is told. Generous extracts are made, often full stories, from the writings of more than sixty authors. The period covered is from the plantation days of 1840 to the close of the Civil War. Many of the chapters are of fascinating interest, the incidents are picturesque, and the thread of events fairly connected for a quarter of a century.

The book is admirably adapted for use in schools as a general reading book, or as an introduction to the text-book study of our history in the grammar grades. New York: The Macmillan Company.

Among recent books for the use of children in the elementary schools, the volumes of the Canterbury classics are deserving of special mention and commendation. A charming book is Ruskin's "King of the Golden River," edited by Katherine Lee Bates, of Wellesley College. The editor's Introduction to the series accompanies this volume, and is well worth a careful reading. There is also a biographical sketch of the author written for children, the creed and pledge of St. George's Guild, a few notes, a reading list to accompany the story, and some very helpful Suggestions to Teachers. To those who are acquainted with the story no words are needed to justify its general use by elementary school classes. It can well be read by most grades above the lowest primaries. It is wholesome in spirit, simple in form, and beautiful as a story. Neglected little Gluck is a delightful character.

Another book for children is Maude L. Radford's edition of "King Arthur and his Knights." The stories are well told. The selection shows good judgment. The mechanical execution is attractive. For pupils from the fourth to the sixth school grades, few books can furnish more desirable reading.

Both books are published by Rand, McNally & Co.

We have received the following books for review in EDUCATION:—

*A Broader Elementary Education.* By J. P. Gordy, Ph.D., LL.D. New York: Hinds & Noble.

*American Heroes and Heroism.* By William A. Mowry, A.M., Ph.D., and Arthur May Mowry, A.M. New York: Silver, Burdett & Co.

*Hero Stories from American History.* By Albert F. Blaisdell and Francis K. Ball. Boston: Ginn & Co. Mailing price, 60 cents.

*How to Make School Gardens.* By H. D. Hemenway, B.S. New York: Doubleday, Page & Co. Price, \$1 net.

*The Nature Study Idea.* By Prof. L. H. Bailey. New York: Doubleday, Page & Co. Price, \$1.50 net.

*Wisdom and Will in Education.* By Charles William Super, Ph.D., LL.D. Harrisburg, Pa.: R. L. Myers & Co. Price, \$1.25.

*The Place of Industries in Elementary Education.* By Katherine Elizabeth Dopp. Chicago: The University of Chicago Press.

*Recent European History, 1789-1900.* By George Emory Fellows, Ph.D., LL.D. Boston: Benj. H. Sanborn & Co. Price, \$1.25.

*More Money for the Public Schools.* By Charles W. Eliot. New York: Doubleday, Page & Co. Price, \$1 net.

*More Baskets and How to Make Them.* By Mary White. New York: Doubleday, Page & Co. Price, \$1 net.

*Wood Folk at School.* By William J. Long. Boston: Ginn & Co.

*A Selection from the Best English Essays.* Edited by Sherwin Cody. Chicago: A. C. McClurg. Price, \$1 net.

*Graded Lessons in Hygiene.* By William O. Krohn, Ph.D. New York: D. Appleton & Co. Price, 60 cents.

*Beginnings of Rhetoric and Composition.* By Adams Sherman Hill. New York: American Book Company. Price, \$1.25.

*Elementary Chemistry.* By Robert Hart Bradbury, A.M., Ph.D. New York: D. Appleton & Co. Price, \$1.25.

*Genetic Psychology for Teachers.* By Charles Hubbard Judd, Ph.D. (International Series.) New York: D. Appleton & Co.

*Brief Greek Syntax.* By Louis Bevier, Jr., Ph.D. New York: American Book Company.

*The Virtues and Their Reasons* (Ethics for Schools.) By Austin Bierbower. New York: Hinds & Noble.

*Romance of the Civil War.* Selected and Annotated by Albert Bushnell Hart. New York: The Macmillan Company. Price, 60 cents.

*The Teaching of History and Civics in the Elementary and the Secondary School.* By Henry E. Bourne, B.A., B.D. New York: Longmans, Green & Co. Price, \$1.50.

*The Teaching of Chemistry and Physics in the Secondary School.* By Alexander Smith, B.Sc., Ph.D., and Edwin H. Hall, Ph.D. New York: Longmans, Green & Co.

*A History of Modern Europe.* By Merrick Whitcomb. New York: D. Appleton & Co. Price, \$1.10.

*First Lessons in United States History.* By Edward Channing. New York: The Macmillan Company. Price, 60 cents.

*General History of Commerce.* By William Clarence Webster, Ph.D. Boston: Ginn & Co.

*Stories from the Hebrew.* By Josephine Woodbury Heermans. New York: Silver, Burdett & Co.

*Descriptive Chemistry.* By Lyman C. Newell, Ph.D. Boston: D. C. Heath & Co.

*A History of American Literature.* By William P. Trent. New York: D. Appleton & Co. Price, \$1.40 net.

*Studies of Familiar Hymns.* By Louis F. Benson, D.D. Philadelphia: The Westminster Press. Price, \$1.50 net.

*Composition and Rhetoric.* By Rose M. Kavana and Arthur Beatty. Chicago: Rand, McNally & Co.

*Natick Dictionary.* By James Hammond Trumbull. Washington: Government Printing Office.

*Students' United States History Outline.* By Arthur D. Cromwell. Chicago: Ainsworth & Co.

*A Dream of Realms Beyond Us.* By Adair Welcker.

*Little Journeys to the Homes of Eminent Orators: William Pitt.* By Elbert Hubbard. Price, 25 cents.

*Nerves in Disorder.* By A. T. Schofield, M.D. New York: Funk & Wagnalls Company. Price, \$1.50.

*Tales from Wonderland.* By Rudolph Baumbach. Translated by Helen B. Dole. Adapted for American Children by Wm. S. M. Silber. New York: A. Lovell & Co. Price, 30 cents.

*Heroes of Chivalry.* By Louise Maitland. New York: Silver, Burdett & Co. Price, 50 cents.

*Selections from Homer's Iliad.* By Allen Rogers Benner. New York: D. Appleton & Co. Price, \$1.60.

*Elementary Physiology and Hygiene.* By H. W. Conn, Ph.D. New York: Silver, Burdett & Co.

*Anthology of English Poetry.* By Robert N. Whiteford, Ph.D. Boston: Benj. H. Sanborn & Co.

*A Geography of Commerce.* By John N. Tilden, M.A., M.D., and Albert Clarke, M.A. Boston: Benj. H. Sanborn & Co.

*Cæsar's Gallic War.* By Harry F. Towle and Paul R. Jenks. New York: University Publishing Company.

*A New German Grammar.* By Marion D. Learned, Ph.D. New York: D. Appleton & Co. Price, \$1.15 net.

*First Book in Hygiene.* By William O. Krohn, Ph.D. New York: D. Appleton & Co. Price, 35 cents.

*How We Are Fed.* By James Franklin Chamberlain. New York: The Macmillan Company.

*Literary Landmarks of Boston.* By Lindsay Swift. Boston: Houghton, Mifflin & Co.

*The Tempest.* Edited by Richard Grant White. Boston: Houghton, Mifflin & Co., in Riverside Literature Series.

*Earth's Enigmas.* By Chas. G. D. Roberts. Boston: L. C. Page & Co. Price, \$1.50.

*The Silent Maid.* By Frederic Werden Pangborn. Boston: L. C. Page & Co. Price, \$1.50.

*Tito.* By William Henry Carson. Boston: C. M. Clark Publishing Company. Price, \$1.50.

*Boston: A Guide Book.* By Edwin M. Bacon. Boston: Ginn & Co.

### Periodical Notes.

Three New York publications have been united, and will hereafter be published under the title of *The Household Ledger*. The magazines thus brought together are *The Ledger Monthly*, founded by Robert Bonner in 1843, *The Household*, first published in Brattleboro, Vt., in 1868, later in Boston, and still more recently in New York, and *Ev'ry Month*, the first issue of which appeared in 1895.—*The Journal of Geography* wrote up Boston in a remarkably thorough manner in its June issue.—The summer issues of *The Youth's Companion* have been most instructive. This paper has probably the most stable constituency of any publication in the United States.—“The Food Problem” is intelligently discussed by Dr. Grace Peckham in *The Delineator* for August.—*Everybody's Magazine* has an interesting article on “The Pope's Successor,” by F. Marion Crawford.—Louis C. Elson contributes a fine article on “Our Public Education in Music,” to the August *Atlantic Monthly*.—*Harper's Magazine* for August is a fine fiction number.—The same is true of *Scribner's Magazine*.—*The World's Work* for August is an educational number well worthy the attention of teachers.

## NEWEST SECONDARY TEXT-BOOKS

### Dresden's German Composition, - - \$0.40

By B. MACK DRESDEN, A.M., Instructor in German,  
State Normal School, Oshkosh, Wis.

Embodies the result of much thought and experience. The material is continuous, and carefully graded in difficulty, commencing with short and interesting anecdotes. Besides the exercises, the book includes a brief review of grammar, explanatory footnotes, and a vocabulary.

### Pearson's Latin Prose Composition, - \$1.00

By HENRY CARR PEARSON, A.B. (Harvard), Horace  
Mann School, Teachers' College, New York.

Combines a thorough and systematic study of the essentials of Latin Syntax with abundant practice in translating English into Latin, and affords constant practice in writing Latin at sight. Review Lessons are introduced at frequent intervals, and the references are to all the leading grammars.

### Gleason's Greek Primer, - - - - \$1.00

By CLARENCE W. GLEASON, A.M. (Harvard), of the  
Roxbury Latin School.

Can be easily completed in less than a school year. The verb is developed slowly and naturally with ample practice on its forms. The infinitive and participle and indirect discourse are treated at considerable length. The greater part of the vocabulary used is drawn from the Anabasis.

### McMahon's Elementary Plane Geometry, \$0.90

By JAMES MCMAHON, Assistant Professor of Mathemat-  
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### Dillard's Aus Dem Deutschen Dichterwald \$0.60

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## CONTENTS.

|                                                                                                               |     |
|---------------------------------------------------------------------------------------------------------------|-----|
| Leadership in the Superintendent. <i>Andrew H. Edson</i> . . . . .                                            | 65  |
| Don Voyage—Through Collage. ( <i>Poem.</i> ) <i>G. H. Palmer</i> . . . . .                                    | 73  |
| The School as a Factor in Industrial and Social Problems. <i>Frank T. Carlton</i> . . . . .                   | 74  |
| The King Arthur Legends in the Hands of the Poets. ( <i>Concluded.</i> )<br><i>Edith V. Lambert</i> . . . . . | 81  |
| The Flowers of Tennyson. <i>Prof. William Bailey, LL.D.</i> . . . .                                           | 90  |
| Checks, and the Habit of Accuracy in Arithmetic. <i>Joseph V. Collins</i> . . . . .                           | 102 |
| Moral Training. <i>Friso J. L. R. Jakobsen</i> . . . . .                                                      | 106 |
| Seven Year Course of Study. <i>Henry Sabin</i> . . . . .                                                      | 108 |
| Three Quatrains. ( <i>Poem.</i> ) <i>Charlotte Fiske Hays</i> . . . . .                                       | 110 |
| Editorial . . . . .                                                                                           | 111 |
| Elementary Law in the Public Schools. <i>R. B. Beckham, LL.B.</i> . . . .                                     | 114 |
| Review Notes . . . . .                                                                                        | 116 |
| Book Notices . . . . .                                                                                        | 118 |
| Periodical Notes . . . . .                                                                                    | 122 |

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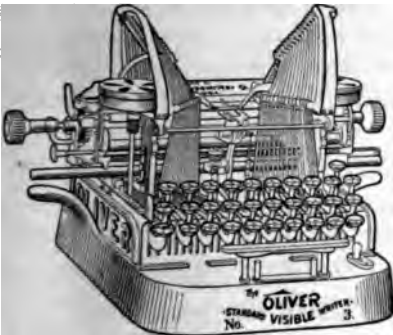
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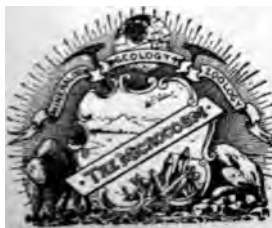
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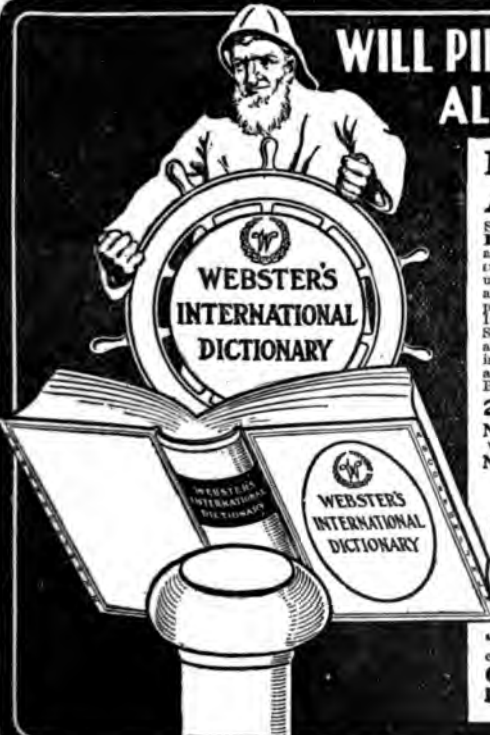
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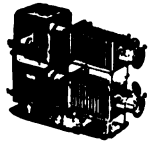
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## *Leadership in the Superintendent.*

ANDREW W. EDSON, ASSOCIATE CITY SUPERINTENDENT, NEW YORK CITY.



HE most important obligation imposed upon him who assumes the role of superintendent is leadership. While conditions differ in different localities, supervision in one place being quite different from that which can be carried out in another, yet it is or it should be alike in this, that it stands for leadership.

Good as our schools are, they ought to be better, they can be better, and that right speedily. The fact that some towns and cities have excellent schools, or even that the average is high, is not enough. So long as there are some poor schools, so long as the character and quality of the work varies from time to time in certain places, so long as there is a possibility of improvement, just so long should the people agitate for better things. The greatest danger of the public schools in any community large or small, is the failure to recognize the need of improvement. School authorities are apt to look at their schools as nearly perfect, far ahead of those in other localities. All this is very gratifying to those engaged in teaching, and very satisfying to the people who support the schools, at the same time it should be borne in mind that nothing is more dead-

ening. Conservatism within certain bounds is safe and commendable, but it is also the great obstacle to advancement.

It is a most natural thing for School Boards long in the service to challenge the claim of the need of skilled supervision, and to inquire why they, the members of the School Board, do not serve the purpose. Many of them are well educated; they have a deep interest in the schools; they know the community intimately, its past history and present ideals; they are willing to give much of their time *pro bono publico*. This fact leads to a brief consideration of the general and special qualifications of a superintendent in preparation for his work. The ideal is high, and should be so, as we are looking at what should be, and at what will be, it is hoped, in the near future.

If it is true that as is the teacher, so is the school, it is equally true that as is the superintendent, so are the teachers. Educational progress in any community rarely, if ever, advances beyond the ideals of the superintendent. A poor superintendent is dear at any price; a good one is above price.

A superintendent should be, first of all, *a teacher of teachers*. This implies three things,—scholarship, professional training, and experience in teaching. His education should be broad and liberal. He should at least be a graduate of some college. He should have scholarly instincts that will lead him to pursue studies in special lines throughout his career, in order that he may be a true leader of his teaching force, and abreast of the keenest minds in the community.

If it is desirable that teachers be graduates of normal schools, much more desirable and even necessary is it that he who assumes to teach and train teachers should himself have had a special professional training. And it goes without saying that a superintendent should have had *actual teaching experience* in the grades he is called upon to supervise. Otherwise his supervision is likely to be very superficial, and a strong probability exists that he may allow office work and petty details to absorb his time and attention.

The attitude assumed by some candidates for a superintendency is similar to that of the young lady when invited to join a Sunday-school class. "Oh! no," she said, "I cannot join a

class as I haven't looked at the lesson. I will, however, *teach* a class, if you desire."

Young college graduates, retired or semi-employed ministers, lawyers, physicians, or business men, frequently appear as candidates for the position of superintendent of the public schools, with little if any experience in teaching the grades they propose to supervise. School officials called upon to select, or state legislation, should make it impossible for such candidates to receive serious consideration for the office.

In the second place, the superintendent should have administrative ability, good sense, and untiring energy. These qualities appeal with force to parents, business men, and would-be critics, for they stamp the man as a good executive, a safe leader. Administrative ability will enable him to advise wisely, and to act intelligently on all business propositions. His sound judgment, positive and well thought-out ideas will have great weight in the community where he is employed. Good sense will enable him to act with discretion on the many difficult and delicate questions sure to come before him. And untiring energy, a capacity for work, will enable him to dispose of business matters at a high rate of speed.

Again, moral integrity and strength of character are essential qualities in true leadership. While a superintendent is a man among men, he should have the courage of his convictions, and be willing to stand unflinchingly for "whatsoever things are true, whatsoever things are honest, whatsoever things are just, whatsoever things are pure, whatsoever things are lovely, whatsoever things are of good report."

If, then, in addition to the qualities named above, the superintendent be able and willing to take the initiative, to accept the responsibilities and penalties of leadership, he may be considered to be fairly well equipped for his special work. And yet in the above-named list of qualifications, it is so often true "one thing thou lackest"; and thus "Whosoever shall keep the whole law and yet offend in one point, he is guilty of all." Many a superintendent has failed of taking a high rank, of being recognized as a leader, through failure in an all around equipment, some one peculiarity or defect dimming all his many good qualities.

The enumeration of the above-named qualities has little reference to the case of many so-called superintendents,—mere followers, time servers, clerks, content to hold their office for what there is in it, and to resort to ordinary political methods to attain their ends. Such men, occasionally found, are no credit to the profession.

Leadership in a superintendent is manifested in his dealings with School Boards, teachers, pupils, and the public. In the case of School Boards, the superintendent's leadership is evidenced in a treatment of questions of administration. In brief, he is expected to keep a close oversight of the school, and to attend to all the duties prescribed by the Board. He is to act as the executive agent and confidential adviser of the Board; to keep the Board informed on the present condition and future needs of the schools; to consult the members, and frequently to defer to their judgment; to take the initiative in the selection and dismissal of teachers; to arrange a course of study, and to attend to the endless details of office routine. As an executive agent he must stand as an educational expert on questions involving the expenditure of money, the construction of school buildings, the selection and purchase of furniture, books, and supplies. He should have expert knowledge on all these questions. He should be familiar with the latest and best thought on what constitutes a properly constructed and well equipped school building, the best means of heating and lighting, of ventilation and sanitation. Members of School Boards are apt to have a very vague knowledge of what a good school building should include. Their judgment in these lines may be valuable, but the superintendent should be equipped with better knowledge on these questions than members of School Boards can be expected to be. He should be able to sketch, to read, and to criticise plans; to suggest improvements in advance of the erection of a school building, as architects often have a much higher regard for what will appear architecturally æsthetic than for convenience and utility.

Either the skilled superintendent, or the busy business or professional man who happens for that year to be chairman of the building committee, must look after the plans and arrange-

ments of a modern school building. And who shall it be? Most assuredly the one trained to an intimate knowledge of what constitutes a complete and satisfactory school building, and one familiar with the latest and best school buildings in the state. And this knowledge should be put to good use throughout the year in inspecting the buildings, out-houses and premises, in attending to the repairs and improvements as needed.

From the financial standpoint the superintendent should be intelligent and reasonable, wisely economical, at least to the extent of avoiding waste and extravagance. In the selection of books and supplies the superintendent should have a large voice. Few superintendents are infallible, and proof against the engaging and mesmerizing influences of the irresistible book agent, but their judgment ought to be clearer than that of the average School Board member on what constitutes the best book in the market. The rules of the Board should require the superintendent to take the initiative in the selection and dismissal of teachers, as it is of first importance that the finest teachers to be found shall be secured, and that poor and unworthy teachers shall not be employed, however great may be the pressure in their favor.

The superintendent should have a place on every committee of the School Board, and should have the right to express judgment on all matters pertaining to school business. In expressing one's views, it should be borne in mind that the members of a School Board respect a man of ideas, a man of positive and decided opinions, even if the views expressed are not in all respects in harmony with their own. Leadership implies positive views worked into clear, well-defined and sensible ideals. Men may differ on educational questions as on all other questions, but they respect ability, frankness and leadership. Many a superintendent makes a mistake in thinking otherwise and in acting accordingly.

There are two courses to which School Boards take exception—dictatorship and subserviency. They feel, and rightly so, that they are the direct representatives of the people, elected or appointed to care for the school interests, and that the superintendent is but their agent to act under their general direction and



authority in matters demanding time, thought and expert knowledge. They do not elect him as boss, dictator or czar. And, again, that which they easily read and emphatically resent is an attitude of watchfulness, to see what may be agreeable to "the powers that be," in which direction the wind is blowing. The trimmer is despised by every intelligent School Board member. He is sized up at his true worth, and his opinions have little weight. As a member once said, "I ask for your opinions not to find out if you agree with me, not even to influence you to agree with me, but to see if you are able to shed any light upon the subject."

It is good policy for the superintendent to consult with members of the Board and with committees of the Board in advance of discussions at a meeting of the full Board in order that some of the members may be well informed and that some one or two may lead in advocacy of desirable measures. Many a good measure has been wrecked by improper advocacy, by inopportune introduction, by personal antagonisms and jealousies. The superintendent should be quick to see and prompt to act when important measures are under consideration. If he is convinced that the committee will pigeon-hole a worthy measure, if he finds that unworthy motives often influence their every action, it may be best at times to appeal to the people through the public press. The members are but public servants. Back fires from fathers and mothers, voters and tax-payers, have a remarkably quickening influence. An heroic attitude on the part of the superintendent may be necessary at times, though not often advisable.

In the second place, the superintendent is called upon to exhibit good leadership in dealing with teachers. This leadership is confined almost entirely to questions strictly professional. A good business man with small training may lead the School Board wisely and well, but to direct the teaching force to their best effort "is another story."

All teachers need assistance. Some of them lack education, training or skill. Many of them are not inclined to work at their maximum capacity. The work often lacks unity and progressiveness. All need to be encouraged and strengthened in

their efforts. The superintendent, as an inspirational force, is needed, and should be frequently in every schoolroom in his town or city. Evidences of leadership will be found in his visits to schools, in his conduct of general or grade meetings, and in private conferences at his office. It is his to observe the spirit of the teachers, to note their preparation for daily work, their methods of teaching, and the results attained, to suggest, to counsel, to encourage, and to awaken, to exalt good work, and to develop strong and commendable features along lines of special excellence. "A word fitly spoken is like apples of gold in pictures of silver."

Teachers' meetings to be of value must have a leader, one who has the time and inclination for preparation, one who is able to make the meetings interesting and profitable. The superintendent is the person for this work. He who neglects this phase of his work misses a great opportunity of leading and enthusing his teachers.

The leadership of the superintendent in dealing with pupils must be of a very general nature, except possibly in small towns and districts. This much he can do, emphasize the fact on all occasions and by constant repetition that the schools exist primarily for the children rather than for teachers and officials. In his dealings he should work primarily for the best interests of the boys and girls in the schools, all of whom are deserving of the best that the town or city can give. He should see that the school buildings and equipment are all that can be desired, and that the very best teachers are employed. He should encourage and stimulate all to complete the course and to aspire for higher and richer things. He should give special attention from time to time to individual promotions and to exceptional cases.

The superintendent who works untiringly and disinterestedly for the young people under his charge will have the hearty satisfaction of witnessing the fruit of his labors manifested in an intelligent and appreciative community.

And finally, leadership in the superintendent should appear in his dealings with the people, especially with the fathers and mothers. He is often called upon to meet and consult them, to

act as an intermediary between teachers and parents, to interest the people in the schools through teachers' meetings, public lectures, school exhibits, special visiting days, and the public press. And these opportunities should not be neglected. He should know the people, take advantage of all occasions of meeting them, be one with the people with whom he lives, and moves, and has his being. While there may be well-founded objections to special zeal and activity on his part in religious and political circles, he should stand as a leader on all moral and social questions. He should stand for the creation, as far as in him lies, of a healthy public sentiment which will manifest itself in decorating the school rooms, in beautifying the school buildings and grounds, in making school life attractive to young people, and in making the community in which he lives purer and better in every respect. Good sense and ready foresight will aid the superintendent in building up a fine school system through the sympathy and support of all intelligent and patriotic citizens.

As supervision becomes better understood, the need of suitable authority to direct school affairs, and the need of protection for worthy and efficient superintendents, should dawn upon our law makers. Leadership implies *authority* and *protection*. If the superintendent is clothed with power he can then be held to accountability, and be responsible for successes and for failures. This power should be legislative rather than local, in order to insure permanency. Most School Boards are reasonable, but the superintendent should have by right and by law considerable authority placed in his hands. Our wisest and best-equipped members of School Boards are the first to relinquish much of the power vested in their Boards in favor of their chosen executive. In some places an entirely different idea prevails, and the superintendent is given almost no authority; he is coolly ignored. And again, the superintendent is entitled to protection through a tenure of office act that will guarantee him his position during good behavior. It should be possible to remove him only on charges and by a two-thirds vote of the School Board. This fact would lead School Boards to be very careful in the selection of a superintendent, and it would also tend to lead them to give him loyal support. The three steps necessary to secure the best

results of skilled supervision are : (1) compulsory school supervision by trained experts for all towns and cities ; (2) legislative authority granted superintendents to act in certain matters ; and (3) protection through tenure of office in the discharge of their duties.

*Bon Voyage,—Through College.*

A HOME PRAYER.

Now as loved one forth must fare  
Lift we hearts in silent prayer ;  
Speed Thine own, dear Lord, we pray,  
'Mid the dangers of the way.

Every force on land or sea  
Knows as master only Thee ;  
Let them then in him fulfill  
All the purpose of Thy will.

Thou who never sleepest, fend  
Every peril from our friend ;  
Loving watch o'er him observe,  
Life and health and strength preserve.

Holy thoughts to him impart,  
Minist'ring to mind and heart ;  
Grant him joy of noble deed  
Done in love, for others' need.

Lend success in that which claims  
Fond ambition's highest aims ;  
May he feel his will and Thine  
Wholly one in work divine.

May we, too, who breathe this prayer  
Feel Thee near, Thy blessing share ;  
Round us let Thy love abide,  
Tarrying till the eventide.

F. H. PALMER.

## *The School as a Factor in Industrial and Social Problems.*

FRANK T. CARLTON, TOLEDO, OHIO.



OUR boys and girls grow to manhood and womanhood under the influence of three important, and, in a large measure, distinct social institutions,—the home, the school, and the playground. In past generations the influence of the home almost overshadowed the remaining two institutions. In the home the child received the major part of his training for future life. The home produced and prepared nearly all of the food consumed by its members; much of the work which is now carried on by the factory was then performed in the home. The home was the scene of diversified industry as well as the center of the child's social life; the school was merely the place where the three R's were expounded to the youth; the playground was broad and spacious, often consisting of an entire farm.

As time proceeded the home lost some of its many industrial functions. This encroachment was caused by changed social and industrial conditions, and these conditions have increased the importance of the school and diversified its functions. The factory system, as it gradually grew and expanded, utilizing the economies of division of labor and centralization of industry, made it desirable and profitable for the farmer to buy much of the goods which he had formerly produced at home. He was once a small manufacturer as well as a worker of the soil; now he is only the latter. The factory system is responsible, also, for the movement of our population from the country to the cities. This concentration has continued, until to-day about one third of the population of the United States may be called urban; and, further, much of our rural territory is so changed in regard to communication and transportation as to have many of the urban advantages.

This important movement has restricted the home occupations and reduced the opportunities for the child to see, much more to

participate in, industrial operations. The familiar home chores are not found in our city home; the domestic work has been lightened in many ways. The home is no longer able to furnish opportunity for manual training, or to give opportunity to perform stated tasks. This necessary training must, therefore, devolve upon the school. The other institution—the playground—has been reduced in size until it is too often only the street or the alley. Here the outflow of the child's energy is restricted, diverted, or repressed by various laws, rules, and regulations, which are the outgrowth of the necessities of crowded city life. It becomes almost necessary for the healthy and vigorous child to become a law-breaker in order to find an outlet for pent-up natural energy.

Great changes in industrial and social life and customs make a striking change necessary in educational methods and practices. The change from the cottage, the individualistic form of industry, to the factory, the co-operative form, has caused a corresponding change in the methods employed in our schools; but as society needs time to adjust itself to the new and changed conditions of life, so is time required to remodel and reconstruct our educational system upon a new basis. At present one serious defect in school work is its failure to broaden the life of the average workingman. The successful business or professional man is the ideal placed before the students; the aim is to produce successful money-making men or leaders in professional life. Education is directed with a view to filling a few prominent positions in the world of affairs, while it is strangely forgotten or overlooked that the great mass of the students cannot, from the very nature of the case, reach those positions. The real facts and conditions must be faced. The earlier forms of industry gave the worker a reasonably broad outlook; division of labor, on the other hand, tends to cramp and narrow his life and vision. As the division becomes more and more minute, the production of goods requires the co-operation of a constantly increasing number of workers. Each one forms but a link in the great industrial chain, and sees only a minute part of the entire operation necessary to make the completed article. Machine production aims at making a uniform and interchange-

able product. The workman is bound down to a rigid and monotonous routine; he becomes almost automatic in his movements. He struggles blindly on, working and producing, without recognizing the end in view, without feeling that he is an integral and necessary factor in the formation of a great industrial machine or organism.

The school must show the social necessity of each person's task, and give a clew to the great industrial labyrinth. The problem of the relation of labor to capital cannot be solved until the work and function of all the factors of production are clearly understood by a majority of the people; when such a condition obtains, the question of the proper distribution of wealth will be greatly simplified. The school attempts to meet the new conditions by enlarging its curriculum; it now aims at more than mere mental training and discipline. Manual training, nature study, kindergartens, athletics, physical training, domestic science, cooking, sewing, drawing, modeling, painting, music, are now incorporated into the course of study. These added features are merely tentative attempts to give training which was formerly provided outside the school, but which cannot be provided under present conditions. Much of this has been added haphazard, in order to fill a vaguely defined need, without proper arrangement or agreement with the older portions of the school curriculum.

The order in which the additions have taken place is fairly well defined. As scientific discoveries and the practical applications of steam and electricity multiplied, our industrial methods were completely changed. A universal need for scientific and technical knowledge arose. The first change from the time-honored curriculum was made in answer to this demand. The physical sciences, physics and chemistry were given a place co-ordinate with mathematics and language. Next arose the demand for manual training, drawing, and training in the household arts, sewing, cooking, etc. This demand arose as a direct recognition of the undesirability of a wide separation of head and hand work. Modern industry is dividing all workers into two distinct classes: the brain workers and the manual workers. The school, by introducing manual training and

drawing, is striving to prevent a one-sided development of its students. The necessity for such training did not arise under the older methods of cottage and village industry. Following closely has come the introduction of the kindergarten, increased attention to physical training and training for citizenship, the demand for night and vacation schools, the addition of "special" schools for the treatment of incorrigibles and truants, and the introduction of nature study and gardening. Not all of these additions to the course of study are to be found in any one system of schools; but each has been somewhere recognized as a desirable part of such a course.

What does this signify? Does it mean that the home and the home training is less important than in former years? It is clearly shown that the importance of the school has increased, and that it is to continue to do so. Home training is highly individualistic; school training is not. A broader view of education is now taken. The state educates the young in order to advance the welfare of society. Its aim is to make the good citizen and the efficient producer and consumer. The result desired is the elevation of the standard of living of society—a social benefit. The mass can, however, be elevated only by acting upon each individual composing it. The school, with its wider view, is to be a mighty force, which is to make for equality of social and industrial life. The school becomes society's agency for the promotion of its collective welfare. Its purpose is chiefly directive. Society is recruited from the young, and it is necessary that the new incoming generations be worthy successors of the outgoing. The attention must be fixed upon those institutions which train the growing child, and not so much upon those corrective and repressive institutions which are needed because the early training and direction of their inmates was not what it should have been. We spend too much money on the diseased tree, but not enough on the growing twig. The functions of the school must relate to the intellectual, physical and moral training of the young; the greater the efficiency and effectiveness of the school, the less the need for corrective and repressive institutions.

The rapid growth of our cities has been a marked feature of



our growth and development. The race must adapt itself to urban conditions. We must learn to live and to thrive in crowded quarters. If the United States is to continue on its present course of advancement and progress, the city must be made clean, healthy, moral, and it must be well governed. A majority of the successful business and professional men of to-day were born in the rural districts. The country has furnished the bone and sinew of the city, and, as a necessary result, it has been drained of many of its best and most progressive citizens. A much larger percentage of our successful men must be drawn in the future from the city-born population. Therefore, the urgent need of improved conditions in our cities.

The problems connected with the city, those relating to labor, and all our great industrial and social questions, are at the root questions of education. The school must broaden the civic and social life of the entire community. It must supply, or attempt to supply, those elements which have been lost owing to recent changes, and it must also develop the new elements which our present social, civic and industrial conditions necessitate. The school must become a center of community life. The school of the future will have a playground or field for athletic sports, a gymnasium, baths, gardens, shops, drawing rooms, domestic science laboratories and reading rooms. Each ward school should become a library center, thus drawing the school and the public library closer together. Evening classes will be organized; lecture courses will be given; clubs, reading circles and debating societies will meet in the public school buildings. These public buildings will be open day and evening. When such a condition of affairs obtains we may hope to send forth young men and women from our city schools who are as strong, healthy, vigorous and ambitious as those from the country have been in the past.

In order that the school may be directive—not repressive—it is necessary that we study the impulses and motives of the young from their standpoint, not that of the adult. Their motives, ideals and ambitions cannot be appreciated from the adult point of view; if the teacher is unable to take the point of view of the child, the opportunity of helping the student at

critical periods in his life is lost. A prominent educator has said, "The child loves to be obedient; he loves law, not restrictive, but directive." I believe that teachers of manual training, nature study, or kindergarten work will agree with this statement. The child is too often given problems which are foreign to his experience,—problems which have no thread of connection with his life outside the school. We give him the printed page before the necessity for it arises in his life, and fail to take advantage of his own personal experiences. One great problem of to-day is that of the truant and "incorrigible" child. Here is a class of children from whose ranks will be drawn in future years a large percentage of those who will fill our almshouses, our prisons, and our corrective institutions. This class furnishes a considerable proportion of the poor and inefficient producers in our city population.

If children are found in our crowded schoolrooms who are not readily amenable to the discipline there in force, it should be clear that the correct kind of training is not given them. Their cases require special treatment. Children from all kinds of homes and home environments should not be treated exactly alike, if good results are to follow our efforts. Financially—let the taxpayer take notice—it is more desirable to treat the case now than later in the career of the particular person. Many of these children will, if left to their own devices in a crowded grade school of to-day, become unworthy specimens of humanity or criminals. These are not bad children; they are rather "morally sick." Improper training and environment have made them what they are to-day. Work and treatment should be given which will furnish a vent for surplus energy, and which will turn them toward correct ideals and good citizenship. For example, a boy whose only playground is the street, and who is continually thrown in contact with a bad class of companions, soon gets the notion that it is manly to smoke cigarettes. Now, no amount of lessons on physiology or talks on the evils of smoking will have any lasting effect upon that boy. If he is to give up what now seems to him to be an essential of manhood, a very strong, concrete motive must be given him. To my mind athletics furnishes the great-

est opportunity in the treatment of such a case. No successful athlete can be an habitual smoker of cigarettes; his habits must be good. The desire to excel in athletic sports and the emulation of such excellence is a deep and abiding trait in the young. We must make the most of it. As Emerson has well said, man "can only be reformed by showing him a new idea which commands his own."

Much has been recently written and said concerning such an education of the negro as will make him a useful and productive man. I fear that this has taken our attention from the educational problems connected with our white loafer, tramp, and ne'er-do-well. If industrial training is good for the negroes, it is also beneficial to the white people. Too many non-producers and inefficient workers exist,—another problem for the public school.

Education is a lifelong process; the influence of the school must be exerted toward aiding and assisting those who are engaged in earning their daily bread. This is the class which is really most susceptible of true education. The enormous growth of correspondence schools proves that many whom our schools overlook or refuse to assist desire and are striving for more knowledge and training. All of these problems are fundamentally the problems of the public school. No other institutions can offer such far-reaching remedies, or can aid as efficiently in bringing about that condition of social and industrial equality toward which society is tending.

## *The King Arthur Legends in the Hands of the Poets.*

LILLIAN V. LAMBERT, DES MOINES, IA.

(Concluded.)



ANOTHER knight who has found favor with the poets is

“The gracious Gawain, scattering words as flowers,  
The kindest head of worldly paramours.”

He was the son of Arthur's half-sister Morgana and of Lot, King of Orkney. A holy man had once conferred upon him a peculiar gift of strength, so that everyday from underne (nine o'clock) till high noon his might increased as much as thrice his normal strength. He was called the “Golden Tongued” because of his great courtesy. Chaucer alludes to him in the *Squire's Tale* where a strange knight “saluteth all the court,”

“With so high a reverence and observance,  
As well in speech as in countenance,  
That Gewain, with his old curtesie,  
Tho' he were come again out of faerie,  
We coude him not amenden with a word.”

A maiden once came to Arthur's court begging vengeance on a knight who had made her lover captive and despoiled her of her land. But the castle of this cruel knight was on magic ground, and such was the power surrounding it that anyone who stepped thereon fell victim to this irresistible influence, and immediately felt both his strength and courage fail. Arthur, with his accustomed kindness, went to her assistance, but no sooner had he stepped upon the castle grounds than he was compelled to succumb to the magic influence, and, losing his strength, was taken prisoner. The victor, however, released him on condition that within a year he would bring to him the correct answer to the question, “What thing is it that women most desire?”

Arthur traveled far and wide, but was unable to find any one skillful enough to answer this momentous question. Finally, when the year had nearly expired, he met an old woman "of such hideous aspect that he turned away his eyes." She answered the question for him, but demanded in return that she be given in marriage to one of his brave young knights. Arthur again seeks the grim conqueror, who is about to claim him a captive, when he answers him in the words of the bard:—

"Yet hold thy hand thou proud baron,  
I pray thee hold thy hand.  
And give me leave to speak once more  
In rescue of my land.  
This morn as I came over a moor  
I saw a lady set,  
Between an oak and a green holly,  
All clad in red and scarlett.  
She says all women would have their will,  
This is their chief desire:  
Now yield, as thou art a baron true,  
That I have paid my hire."

—Old Ballad.

Arthur's success does not bring with it happiness, for he sorrowfully remembers his promise. Finally he confides his trouble to his nephew, Sir Gawain, who generously agrees to marry the hideous old woman. The King responds,—

"Now nay, now nay, good Sir Gawain,  
My sister's son ye be;  
That loathly lady's all too grim  
And all too foul for thee."

But the young knight insists, and the marriage is quietly performed with "no joye ne feste at alle but with heviness and mochel sorwe."

Imagine his joy and surprise to find this hideous creature suddenly changed into a beautiful maiden. She had been transformed under the cruelty of enchantment, and her marriage, together with the fact that her husband had yielded to her will, was all that was needed to break the magic spell, for now

"Sweet blushes stayned her red, red cheek,  
Her eyes were black as sloe;  
The ripening cherrie swelled her lippe,  
And all her neck was snow."

Gawain passes a long, eventful life, and finally dies in the encounter between Arthur and Lancelot.

Gawain's brother, Gareth, has also found for himself a place in literature. Coming to Arthur's court in disguise, he craves the privilege of serving a year in the King's kitchen. Meanwhile a fair maiden, Lynette, seeks the King, craving help to deliver her captive sister, Lyonors. Arthur entrusts this mission to Gareth, but Lynette, thinking him only a scullion, insults him at every opportunity. He meets all her rebuffs kindly, and by his gentleness and bravery finally wins her approbation and love, for

"The fair hand of Gareth was found in fight  
Strong as a sea beast's tushes and as white."

Conquered at length by his patience she speaks thus to him:—

"Shamed am I that I so rebuked, reviled,  
Missaid thee. Noble I am, and thought the king  
Scorned me and mine; and now thy pardon, friend,  
For thou hast ever answer'd courteously,  
And wholly bold thou art, and meek withal  
As any of Arthur's best.

And he that told the tale in older times  
Says that Sir Gareth wedded Lyonors,  
But he that told it later, says Lynette."

—Gareth and Lynette, *Tennyson*.

The gentle patience of Enid shown toward her husband, Sir Geraint, when in a wild fit of jealousy he so cruelly tested her love, brought with it its reward,—a return to conjugal peace and happiness. Enid would hardly do for a twentieth century woman, yet it is a kindly smile we give to her forbearance while she receives indignity after indignity from her angry lord, and silently but admiringly watches his deeds of prowess. We are glad to see the cloud of suspicion hanging over her at length clear away when we hear Geraint say:—

"Enid, I have used you worse than that dead man;  
Done you more wrong; we both have undergone  
That trouble which has left me thrice your own:  
Henceforward I will rather die than doubt."

—Enid, *Tennyson*.

This experience, hard though it was, seemed beneficial to both, for when they had returned to their own kingdom,

"They called him the great Prince and man of men.  
But Enid, whom the ladies loved to call  
Enid the Fair, the grateful people named  
Enid the Good; and in their halls arose  
The cry of children, Enids and Geraints  
Of times to be: nor did he doubt her more,  
But rested in her fealty; till he crown'd  
A happy life with a fair death."

—Enid, *Tennyson*.

Sir Percivale, who spends his boyhood alone with his mother in the great forest, and thus never comes in contact with the world until he seeks admission to knighthood, and Sir Galahad the Pure, are noted for the important part they take in the search for the Holy Grail.

The magnificent strength of the two brothers, Balen and Balan, attracts our attention. We hear with regret

"Of the toil of Balen all his days  
To reap but thorns for fruit and tears for praise;  
Whose hap was evil as his heart was good,  
And all his works and ways by wold and wood  
Led through much pain to one last laboring day,  
When the blood washed the tears out from his way."

—Tristram of Lyonesse, *Swinnburne*.

A damsel comes to Arthur's court girt with a cumbrous sword. Thus she speaks to the King and his courtiers: "The sword with which I am thus girt gives me great sorrow and encumbrance, for I may not be delivered of it till I find a knight faithful and pure, strong in body, and of valiant deeds, without guile or treachery, who shall be able to draw it from its scabbard." Many brave knights in vain try to wrest the sword from its sheath.

"Then forth strode Lancelot, and laid  
The mighty moulded hand that made  
Strong knights reel back like birds affrayed  
By storm that smote them as they strayed  
Against the hilt that yielded not.  
Then Tristram, bright and sad and kind,  
As one that bore in noble mind  
Love that made light as darkness blind,  
Fared even as Lancelot."

—The Tale of Balen, *Swinburne*.

Balen then seeks permission to try, and easily removes it. The maiden asks that he return the sword to her, but he refuses to do so. She then answers that with it he shall slay the best friend he ever had, and that it shall be his own destruction.

We notice Balen's hasty temper. We see his admiration for the Queen, and the device of her crown which he bears upon his shield, hoping thereby to be made more gentle in disposition and manner.

"And Arthur, when Balen sought him said,  
'What wilt thou bear?' Balen was bold and asked,  
To bear her own crown royal upon shield,  
A golden earnest of a gentle life."

—Balen and Balan, *Tennyson*.

But it needed more than this reminder of the Queen to check his rash spirit. In the presence of the King and his court, with one stroke of his sword he impatiently strikes off the head of the Lady of the Lake, who had killed his mother by magic. Sir Launceor pursued him to avenge the lady's death, and encounters him in combat.

"As wave on wave shocks, and confounds  
The bounding bulk whereon it bounds,  
And breaks and shattering seaward sounds,  
As crying of the old sea's wolves and hounds  
That moan and ravin, and rage and wail,  
So steed on steed encountering sheer  
Shocked, and the strength of Launceor's spear  
Shivered on Balen's shield, and fear  
Bade hope within him quail."

—The Tale of Balen, *Swinburne*.

Launceor finally falls victim to Balen's superior skill. A maiden suddenly approaches and kills herself at sight of the knight's dead body, for Launceor was her lover. Then Merlin



speaks to Balen: "Thou has done thyself great harm not to have saved that lady's life who killed herself, and because of it thou shalt strike the most dolorous stroke that ever man struck save he that smote our Lord, and through that stroke three kingdoms shall be overwhelmed in poverty and misery."

With this portentous prophecy hanging over his head we follow him when he enters the palace of King Pellis, to whom had been given the honor of guarding the Holy Grail because of his descent from Joseph of Arimathæa. We see Balen in his rashness seize the sacred sword that had pierced our Saviour's side, and strike with it the "dolorous stroke" that caused the destruction of the palace and the loss of the Holy Grail.

Horried by what he had done, Balen changes his shield for a plain one, leaves the country of King Pellis, and finally encounters an unknown knight who challenges him to an encounter. Too late he discovers that his adversary is his well-loved brother, Balan, who thus addresses him:—

"O Balen, Balen, I that fain had died  
To save thy life hath brought thee to thy death.  
Why had ye not the shield I knew? and why  
Trampled ye thus on that which bore the crown?"  
"O brother," answered Balen, "woe is me!  
My madness all my life hath been my doom,  
Thy course and darkness all thy day: and now  
The night hath come. I scarce can see thee now.  
Good-night, true brother."  
. . . Balan answered low:  
"Good-night, true brother, here! good-morrow there!  
We two were born together, and we die  
Together by one doom;" and while he spoke  
Closed his death drowsy eyes, and slept the sleep  
With Balen, either locked in either's arms."

—Balen and Balan, *Tennyson*.

No characters have received more artistic treatment from the pen of the poets than Tristram, the harper, the lover, and the warrior; and his two Iseults, the one of Ireland, and the other of Brittany. Tristram is the son of Meliadus, king of Lyonesse, and of Isabella, sister of Mark, king of Cornwall. Isabella, dying soon after the birth of her son, requested that the babe be called Tristram, meaning sorrow.

"But nothing save his name he had of grief,  
The name his mother, dying as he was born,  
Made out of sorrow in very sorrow's scorn,  
And set it on him smiling in her sight.  
Tristram, who now, clothed with sweet youth and might,  
As a glad witness won that bitter name,  
The second symbol of the world of fame."

—Tristram of Lyonesse, *Swinburne*.

But fortune smiled on the little Tristram in spite of his sad name. He developed into a bright, strong, handsome young man.

"I know him by his harp of gold,  
Famous in Arthur's court of old;  
I know him by his forest dress,  
The peerless hunter, harper, knight,  
Tristram of Lyonesse."

—Tristram and Iseult, *Matthew Arnold*.

With the great strength of the warrior was combined the skill of the musician, for

"Song sprang beneath his lips and hands, and shone  
Singing, and strengthened and sank down thereon  
As a bird settles in the second flight.  
Then from beneath his harping hands with might  
Leapt, and made way, and had its fill, and died."

—Tristram of Lyonesse, *Swinburne*.

When yet but a young man, Tristram is knighted by his Uncle Mark that he may meet in knightly encounter Moraunt, brother of the king of Ireland, who had come to Cornwall to demand tribute of the king. Though the Irishman is noted for his strength and knightly deeds, he is defeated by young Tristram, who cleaves his head, leaving a portion of the sword in the wound. Moraunt returns to Ireland, where he dies. But Tristram, in his turn, receives a severe wound from the poisoned sword of his antagonist. This wound refuses to heal, and in search of health, he finally lands in Ireland at the court of the king whose brother he had killed. To disguise himself he changes his name to Tramtrist. Here he meets the beautiful Iseult, daughter of the king, who nurses him back to health.

" Iseult, more fair than foam or dawn was white,  
 Her gaze was glad past love's own singing of,  
 And her face lovely past desire of love.  
 Past thought and speech her maiden motions were;  
 And a more golden sunrise was her hair.  
 . . . Her warm eyelids shone  
 As snow sun-stricken that endures the sun,  
 And through their curled and coloured clouds of deep,  
 Luminous lashes, thick as dreams in sleep,  
 Shone as the sea's depth swallowing up the sky's,  
 The springs of unimaginable eyes.

—Tristram of Lyonesse, *Swinnburne*.

A close friendship is formed between these two, which does not develop into love, for Tristram's identity is discovered, and he leaves the Irish court to return to Cornwall. His Uncle Mark, hearing from him of the beauty of the Irish princess, sends him again to the Irish court to bring Iseult to Cornwall that she may become his queen. Tristram obeys, and all might have gone well had not he and Iseult accidentally drunk a love potion which the princess' mother had prepared for her daughter and King Mark to drink upon their wedding day.

" And hands that wist not though they dug a grave,  
 Undid the hasps of gold, and drank, and gave,  
 And he drank after, a deep, glad, kingly draught;  
 And all their life changed in them, for they quaffed  
 Death; if it be death so to drink, and fare  
 As men who change and are what these twain were."

—Tristram of Lyonesse, *Swinnburne*.

Though she loves Tristram, Iseult, true to her promise, becomes the wife of the king. A checkered career awaits the lovers. The affection they bear for each other, together with their desire to be loyal to King Mark, leads them into various vicissitudes of fortune, and brings to them a minglement of joy and sorrow. Finally Tristram has occasion to cross the sea to Brittany, where he assists King Heol to win a victory over his enemies. In gratitude for his timely aid, Heol offers him in marriage his daughter Iseult, known as "Iseult of the White Hands," to distinguish her from "Iseult the Fair." Iseult of Brittany also acts as a nurse to Tristram, and is represented as being as beautiful as her rival bearing the same name.

"What lady is this whose silk attire  
Gleams so rich in the light of the fire,  
The ringlets on her shoulders lying  
In their flitting lustre vying  
With her clasp of burnished gold  
Which her heavy robe doth hold?

I know her by her mildness rare,  
Her snow-white hands, her golden hair;  
I know her by her rich silk dress  
And her fragile loveliness—  
The sweetest Christian soul alive,  
Iseult of Brittany."

—Tristram and Iseult, *Matthew Arnold*.

Tristram finally decides to marry the gentle princess, hoping thus to forget his Uncle Mark's wife. But nothing can annul the influence of the magic love potion. The marriage brings nothing but sadness to all concerned. Tristram cannot remain away long from Cornwall's queen. Whenever her conscience troubled her in regard to their attitude toward each other and the gentle princess of Brittany, he soothed her with the thought that if they had sinned they had but imitated Queen Guinevere.

"He answered, 'O my soul, be comforted!  
If this be sweet, to sin in leading-strings,  
If here be comfort, and if ours be sin,  
Crowned warrant had we for the crowning sin  
That made us happy.'"

—The Last Tournament, *Tennyson*.

Finally Tristram returns to Brittany, where he sickens, and begs that "Iseult the Fair" be sent for before he dies. His wife, not fully understanding the relationship existing between them, consents. White sails are to be placed upon the boat if it brings her to him; black, if she fails to come. Each day Tristram walks down to the shore to watch for the boat. When at length his strength fails, a servant is instructed to watch in his stead and bring him news as soon as the vessel appears in sight. According to the old romancers, the vessel sails joyfully along with white sails flying in the wind, but the wife, jealous of what she has heard concerning her husband, instructs the servant to report that they are black. Crushed by this news, Tristram dies without a last farewell from his beloved Iseult.

Matthew Arnold has made the story end more happily. With their arms about each other, Tristram and "Iseult the Fair" finish together their life and their unhappy love.

"You see them clear—the moon shines bright,  
 Slow, slow, and softly where she stood  
 She sinks upon the ground; her hood  
 Had fallen back; her arms outspread  
 Still hold her lover's hand; her head  
 Is bow'd half-buried on the bed;  
 O'er the blanched sheet her raven hair  
 Lies in disordered streams; and there  
 Strung like white stars, the pearls still are,  
 And the golden bracelets, heavy and rare,  
 Flash on her white arms still.

Thou wilt rouse no sleeper here,  
 For those thou seest are unmoved,  
 Cold, cold are those that lived and loved.  
 . . . The air of the December night  
 Steals coldly around the chamber bright  
 Where those lifeless lovers be."

—Tristram and Iseult, *Matthew Arnold*.

The magician Merlin has always been a favorite with the poets. According to the romancers, he had no mortal father, but was the son of an Incubus, an evil sprite that inhabits the air. His mother was a virtuous woman, and had him baptized when he was yet but a tiny babe. This holy rite annulled the evil purposes of the sprites, but the child showed his supernatural origin by conversing intelligently when he was only a few weeks old. The magic power with which he was endowed enabled him to do all sorts of marvelous things.

"To him  
 Great light from God gave sight of all things dim,  
 And wisdom of all wondrous things, to say  
 What root should bear what fruit of night or day;  
 And sovereign speech and counsel above man:  
 Wherefore his youth like age was wise and wan."

—Tristram of Lyonesse, *Swinburne*.

He has won great renown as an artificer and builder. He it was who devised Arthur's beautiful palace at Camelot, of which we have already spoken. He also devised certain magic fountains that are mentioned by Spenser and Ariosto. Spenser

represents him as the artificer of the impenetrable shield and other armor of Arthur's. Ariosto tells us of a hall adorned with prophetic paintings executed by demons, under his direction, in a single night.

"Merlin had in magic more insight  
Than ever him before or after living wight."

He was one of the counselors of Uther and also of Arthur. Even so renowned a sage as Merlin was not beyond the influence of woman's wiles. Vivien, the Lady of the Lake, pretended great devotion for him in order that she might learn all his arts and magic spells. She even beguiled from him the secret whereby a human being might be imprisoned in a hawthorn tree, where he must dwell forever.

"For Merlin once had told her of a charm,  
The which if any wrought on any one  
With woven paces and with waving arms,  
The man so wrought on ever seemed to lie  
Closed in the four walls of a hollow tower,  
From which was no escape for evermore."

—Vivien, *Tennyson*.

Matthew Arnold has told us how, having discovered this magic spell, she ungratefully turns it upon the magician himself, of whose love she had become weary.

"Through those golden boughs the golden sunshine creeps,  
Where Merlin by the enchanted thorn-tree sleeps.  
For here he came with the fay Vivien  
One April, when the warm days first began.  
He was on foot, and that false fay, his friend,  
On her white palfrey; here he met his end,  
In those lone sylvan glades, that April day.

Her behaviour had the morning's fresh, clear grace,  
The spirit of the woods was in her face;  
She looked so witching fair, that learned wight  
Forgot his craft, and his best wits took flight,  
And he grew fond and eager to obey  
His mistress, use her empire as she may.

Merlin and Vivien stopped on the slope's brow,  
To gaze on the light sea of leaf and bough.  
They sat them down together, and a sleep  
Fell upon Merlin, more like death, so deep.

Her fingers on her lips, then Vivien rose,  
 And from her brown-lock'd head the wimple throws  
 And takes it in her hand, and waves it over  
 The blossom'd thorn-tree and her sleeping lover.  
 Nine times she waved the fluttering wimple round,  
 And made a little plat of magic ground.  
 And in that daisied circle, as men say,  
 Is Merlin prisoner till the judgment day;  
 But she herself whither she will can rove—  
 For she was passing weary of his love."

—Tristram and Iseult, *Matthew Arnold*.

The final breaking up of the Round Table and Arthur's court of splendor comes through the Queen. The affection she gave Lancelot could not be forever concealed from the King. It finally reached his ears through the tale-bearing of his nephew, Modred. Arthur, indignant and frenzied, orders his Queen to be burned alive, but Lancelot escapes with her to his castle at Joyous Gard. War ensues and the King lays siege to the castle. In vain Lancelot, unwilling to fight against his King, seeks to make reparation by sending the Queen back. At length Arthur is obliged to raise the siege to return home to protect his kingdom against his traitor nephew. Arthur encounters Modred at Camlan in Lyonesse, where both of them are killed, and Guinevere retires to a convent at Almesbury.

Tennyson has departed somewhat from the version of Malory. He has Guinevere retire to the convent as soon as her sin is discovered. Arthur comes to take a last farewell of her before he summons the remnant of his once powerful army to march against the traitor and usurper.

"Yet think not that I come to urge thy crimes;  
 I did not come to curse thee, Guinevere.

The wrath that forced my thoughts on that fierce law,  
 The doom of treason and the flaming death,  
 (When first I learnt thee hidden here) is past.

Lo! I forgive thee, as Eternal God  
 Forgives: do thou for thine own soul the rest.  
 But how to take a last leave of all I loved?  
 O golden hair, with which I used to play  
 Not knowing. O imperial moulded form,  
 And beauty such as never woman wore,  
 Until it came a kingdom's curse with thee—

I cannot touch thy lips, they are not mine,  
But Lancelot's; nay, they never were the King's.  
I cannot take thy hand; that too is flesh,  
And in the flesh thou hast sinn'd; and mine own flesh,  
Here looking down on thine polluted, cries  
'I loathe thee;' yet no less, O Guinevere,

So far, that my doom is, I love thee still.  
Perchance, and so thou purify thy soul,  
And so thou lean on our fair father Christ,  
Hereafter in that world where all are pure  
We two may meet before high God, and thou  
Wilt spring to me, and claim me thine, and know  
I am thine husband—not a smaller soul,  
Nor Lancelot, nor another. Leave me that,  
I charge thee, my last hope. Now must I hence."

—Guinevere, *Tennyson*.

Too late the Queen discovers that Arthur is the "highest and most human too," and that to him, not Lancelot, belongs the true love of her higher, better nature. She remains at Almesbury with the nuns,

"Till in time their Abbess died.  
Then she, for her good deeds and her pure life,  
And for the power of ministration in her,  
And likewise for the high rank she had borne,  
Was chosen Abbess; there, an Abbess, lived  
For three brief years, and then, an Abbess, past  
To where beyond these voices there is peace."

—Guinevere, *Tennyson*.

After taking his last sad leave of Guinevere, Arthur goes in pursuit of his traitor nephew.

"Then rose the King and moved his host by night,  
And ever pushed Sir Modred league by league,  
Back to the sunset bound of Lyonesse.  
And there, that day when the great light of heaven  
Burn'd at his lowest in the rolling year,  
On the waste sand of the waste sea they closed.  
Nor ever yet had Arthur fought a fight  
Like this last, dim, weird battle of the west.  
. . . Then Modred smote his liege  
Hard on the helm which many a heathen sword  
Had beaten thin: while Arthur at one blow,  
Striking the last stroke with Excalibur,  
Slew him, and all but slain himself, he fell."

—The Passing of Arthur, *Tennyson*.



Then follows the story of how the wounded King requests Sir Bedivere to throw his sword, Excalibur, into the lake and thus return it to the Lady of the Lake from whom he had received it. Sir Bedivere, dazzled by the brilliancy of the jewels in the hilt, makes two unsuccessful efforts to do so, but at length, moved by the entreaties of his dying King, he took the sword again

“ And ran,  
And, leaping down the ridges lightly, plunged  
Among the bulrush beds, and clutched the sword,  
And strongly wheel'd and threw it. The great brand  
Made lightnings in the splendor of the moon,  
And flashing round and round, and whirl'd in an arch,  
Shot like a streamer of the northern morn,  
Seen where the moving isles of winter shock  
By night, with noises of the Northern Sea.  
So flashed and fell the brand Excalibur:  
But ere he dipt the surface, rose an arm  
Clothed in white samite, mystic, wonderful,  
And caught him by the hilt, and brandished him  
Three times, and drew him under in the mere.”

—The Passing of Arthur, *Tennyson*.

At his request Sir Bedivere then carries King Arthur to the margin of the lake.

“ Then saw they how there hove a dusky barge,  
Dark as a funeral barge from stem to stern,  
Beneath them; and descending they were ware  
That all the decks were dense with stately forms,  
Black-stoled, black-hooded, like a dream—by these  
Three Queens with crowns of gold. . . .  
Then murmured Arthur, ‘ Place me in the barge.’  
So to the barge they came. There rose three Queens,  
Put forth their hands, and took the King, and wept.  
But she, that rose the tallest of them all,  
The fairest, laid his head upon her lap,  
And loosed the shatter'd casque, and chafed his hands,  
And called him by his name, complaining loud,  
And dripping bitter tears against a brow  
Striped with dark blood. . . .  
Then loudly cried the bold Sir Bedivere,  
‘ Ah! my Lord Arthur, whither shall I go?’  
. . . . .  
And slowly answer'd Arthur from the barge:  
‘ The old order changeth, yielding place to new,  
And God fulfills himself in many ways,  
Lest one good custom should corrupt the world.  
. . . . .

But now farewell. I am going a long way  
With these thou seest—if indeed I go  
(For all my mind is clouded with a doubt)  
To the island valley of Avillon;

Where falls not hail, or rain, or any snow,  
Nor ever wind blows loudly; but it lies  
Deep-meadow'd, happy, fair with orchard lawns  
And bowery hollows crown'd with summer sea,  
Where I will heal me of my grievous wound.'

So said he, and the barge with oar and sail  
Moved from the brink, like some full-breasted swan  
That, fluting a wild carol ere her death,  
Ruffles her pure cold plume, and takes the flood  
With swarthy webs. Long stood Sir Bedivere  
Revolving many memories, till the hull  
Look'd one black dot against the verge of dawn,  
And on the mere the walling died away."

—The Passing of Arthur, *Tennyson*.



## *The Flowers of Tennyson.*

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HE verse of no English poet since Shakespeare is so adorned with botanical imagery as is that of Tennyson. Exception might here be taken in the case of Erasmus Darwin, but his subjects were purely botanical, his verse pedantic, and the treatment prosy. He was a good observer, but no poet. He did not use flowers for embellishment, but for dissection. In his writings he walks rather in a well-kept garden than in the woods and fields. Milton, who has many floral allusions, very beautiful withal, borrowed his plants from Greece and Rome. They all have a Mediterranean character. They are such as the asphodel, the amaranth, the olive and the myrtle. Shakespeare alone, in his time, seems to have known and loved the wayside flower. He knew his trees as well. In the forest of Arden, in those wonderful woods near Athens, we smell the herbage, and rest in the shade of actual oaks. In fact we are sorry when business calls us thence. Lear introduces us to all

"The idle weeds that grow  
In life's sustaining fields,"

and with Ophelia we pluck many a homely, much-loved flower. They are associated with the noble Imogen, the courtly Rosalind, and Cordelia with the voice "sweet and low, an excellent thing in woman."

Cowper, Thomson, Wordsworth, Burns, Scott, Byron, all have their floral allusions, but we reaffirm our belief that for frequency of mention, Tennyson excels them all. In accuracy of description he has no modern peer. Often the whole pose, habit, surroundings of a plant, are limned in a single, immortal line.

Let us ramble through his poems. Many of them are suffused with autumnal haze. In one of the earlier ones, *Mariana*, we find this bit of description, true to nature, brief as it is:—

"With blackest moss the flower-pots  
Were thickly crusted one and all."

Go into any damp hothouse and so you will find them. No matter if the so-called moss is a proto-coccus; the average reader knows little of the latter. It is just as well to say moss, and far more poetical. Again, in another poem, note this:—

“The solemn palms were ranged  
Above, unmoved of summer wind.”

So unlike the deciduous leaved trees of the temperate zone, with their ceaseless flutter and stir.

“Thick rosaries of scarlet thorn.”

Can such a line be excelled?

“Willows whiten, aspens quiver.”

Look at either when a stiff breeze is blowing, and note how one shows its silvery sub-surfaces, and the other forever trembles. In the *May Queen* occurs the line, as apt here as in old England, descriptive of the locale of our miscalled cowslips, *Caltha palustris*,—

“The wild marsh-marigold shines like fire  
In swamps and hollows gray.”

Let anyone attempt to better that by a word. Notice—not only swamps, *but* hollows. This plant, by the way, is a favorite with the poets. Jean Ingelow, it will be remembered, speaks of the “brave marsh mari-buds, rich and yellow.”

In the *Lotus Eaters*, one of the very finest of all Tennyson's poems, the lines of which abide lovingly in the memory, a mingling of sound with sense, we recall the line,—

“A meadow set with slender galingale.”

Our galingale is that tall, rush-like plant found in marshes, a species of *Scirpus*, tasseling out into a loose panicle of woolly brown heads; a very ornamental thing, often mistaken for a grass. Turn in the same poem to a consummate description:—

“Here are cool mosses deep,  
And thro' the moss the ivies creep,  
And in the stream the long-leaved flowers weep,  
And from the craggy ledge the poppy hangs in sleep.”

Does not this act as nepenthe to the reader, taking him to the land where

“'Tis always afternoon”?

Again, when chance offers, look at the opening bud of the horse-chestnut, that thing of beauty. The sunlight indeed coaxes out its tiny, gloved fingers.

In the *Morte d'Arthur* is a perfect picture of a lake shore late in autumn; a description true to any north temperate locality:—

“The many-knotted water-flags  
That whistled stiff and dry about the marge.”

Involuntarily, as we read, we draw nearer to the fire and stir the coals. It was from this solemn lake, crag-girdled, that the mystic arm, “clothed in white samite,” rose to grasp the sword “Excalibur.”

Where shall we cull when every poem is so rich? Cannot anyone confirm the following sketch?

“A league of grass, wash'd by a slow, broad stream,  
That stirred with languid pulses of the oar,  
Waves all its lazy lilies and creeps on.”

We proceed to other poems, leaving “many a gem of purest ray serene,” to the *Two Voices*, where we find this couplet:—

“The furry prickles fire the dells,  
The fox-gloves cluster dappled bells.”

We often see the English fox-glove in our gardens. It is the *Digitalis purpurea*, a well-known drug of great potency and useful in its place. Even here every child has made a thimble of its posies. All know its spotted throat. In England it is a familiar hedge-plant and wayside flower.

The *Sleeping Palace*, the old, sweet story of the enchanted princess awakened after a hundred years by the kiss of the one fatal prince, has never been so well told as by Tennyson. We cannot but feel that if not all true it ought to be. The legend has again all the charm lent it in infancy. In the garden of the castle, which one is sure that he has himself seen somewhere, nature is alive, while within the halls the king, the courtiers, the enchanted princess, sleep.

“All round a hedge upshoots, and shows  
At distance like a little wood,  
Thorns, ivies, woodbine, mistletoe,  
And grapes with bunches red as blood;  
All creeping plants, a wall of green  
Close-matted, burr, and brake, and brier.”

In the poem of *Amphion* there is almost a manual of botany. We quote but one passage. You can see the picture any mid-summer day :—

“ The linden broke her ranks and sent  
The woodbine wreathes that bind her,  
And down the middle, buzz she went,  
With all her bees behind her.”

Another stream view is exhibited in the stanza from *Farewell* :—

“ But here will sigh the alder tree,  
And here thine aspen shiver;  
And here by thee will hum the bee,  
Forever and forever.”

Scattered through the *Idylls of the King* are many bits of powerful description where plants figure prominently. Here is a master stroke :—

“ Then rode Geraint into the castle court,  
His charger trampling many a prickly star  
Of sprouted thistle on the broken stones;  
He looked and saw that all was ruins.  
Here stood a shattered archway plumed with fern,  
And here had fallen a great part of a tower,  
Whole, like a crag that tumbled from the cliff,  
And like a crag was gay with wilding flowers;  
And high above a piece of turret stair,  
Worn by the feet that now were silent, wound  
Bare to the sun, and monstrous ivy stems  
Claspt the gray walls with hairy fibred arms,  
And sucked the joining of the stones, and look'd  
A knot, beneath, of snakes, aloft, a grove.”

Here is another lovely bit. *Doré* endeavored to perpetuate it, but did not wholly catch its essentially English beauty :—

“ Himself beheld three spirits, mad with joy,  
Come dashing down on a tall wayside flower,  
That shook beneath them, as the thistle shakes  
When three gray linnets wrangle for the seed.”

In the prologue to *The Princess*, one of the most charming portions of the poem, we stroll in Sir Walter Vivian's park under the

“ Broad, ambrosial aisles of lofty lime,  
Nolay with bees and breeze from end to end.”

The lime is the European linden, so well known to us as a shade tree. In late June it is murmurous when in blossom, and it flowers profusely, scenting the whole air. Tennyson seems especially fond of this tree. The allusions to it are incessant, and always pertinent, as in the line,—

“A myriad emeralds break from the ruby-budded lime.”

Here is a line worth pages of ordinary description; it is from *In Memoriam*,—

“When rosy plumelets tuft the larch.”

The fertile catkins, developed early, are crimson in flower, and appear midst the soft, new, feathery foliage. Unlike most *Conifera*, the larch has deciduous leaves.

Here is a picture of checkered shade:—

“Witch elms that counter-change the floor  
Of this flat lawn with dusk and bright.”

The beginning of Part CI of the same poem gives us this wonderful painting, which makes less gifted observers envious:—

“Unloved, that beech shall gather brown,  
This maple burn itself away;

Unloved, the sunflower, shining fair,  
May round with flowers her disk of seed,  
And many a rose carnation feed  
With summer spice the humming air.”

We now come to *Maud*, perhaps the most familiar as it is the most passionate of Tennyson's poems. It is one redolent with the scent of flowers. The very first lines embody a botanical description:—

“I hate the dreadful hollow behind the little wood,  
Its lips in the field above are dabbled with blood-red heath.”

This description will do for our American lilies:—

“Woodland lilies,  
Myriads blow together.”

Have we not seen them so in the meadows along our New England railroads in July and August? The couplet is almost as fine as Wordsworth's “Host of golden daffodils.” The

“crimson-tipped daisy” of Burns is here made by the lover to do immortal homage:—

“Her feet have touched the meadows  
And left the daisies rosy.”

Here is a different kind of figure, showing acute observation:—

“The dry-tongued laurel’s pattering talk.”

Mind, this does not refer to our mountain laurel or *Kalmia*, but to some true laurel or bay. Listen to this plaint for the exiled trees of Syria, who “cannot sing the Lord’s song in a strange land”:—

“Oh, art thou sighing for Lebanon,  
Dark cedar, tho’ thy limbs have been increased?”

In the ecstatic song of his triumphant wooing, the lover flings about his flowers with unstinting hand. The woodbine, the jessamine, the rose, the lily, the acacia, the daffodil, the violet, burst into joyous flower. Then comes a matchless stanza:—

“The slender acacia would not shake  
One long milk bloom on the tree;  
The white lake blossom fell into the lake  
As the pimpernel dozed on the lea.”

The pimpernel, or poor man’s weather glass, is the *Anagallis arvensis*, a tiny plant in sandy places on our coasts. The red, or rarely blue, flowers close when the sun is overcast. The verse above, then, foreshadows gloom.

The passion flower and the larkspur also appear in this melodious song. Even in that magnificent Ode to the Duke of Wellington we have the use of flowers:—

“He shall find the stubborn thistles bursting  
Into glossy purples, which outshine  
All voluptuous garden roses.”

It would be an interesting thing to note, as has Grindon for Shakespeare, how many different plants are mentioned in Tennyson, and how often. The list would be a long one; we have not begun to exhaust the references.



## Checks, and the Habit of Accuracy in Arithmetic.

JOSEPH V. COLLINS, STEVENS POINT, WIS.



RELENTY of experience convinces teachers that assurance plays a large part in individual development. Great strides can be made by a pupil in a short time if he has confidence in his powers, and feels that he understands perfectly what he is doing. On the other hand, a pupil who is careless and inaccurate either in calculation or thinking comes to lack confidence in his powers, and may actually retrograde instead of progress. This parting of the ways, *i. e.*, gaining confidence or losing it, occurs every time a new topic or a new subject is taken up. For this reason it is exceedingly important in arithmetic that *the habit of accuracy* in both thinking and mechanical work should be inculcated from the beginning of the training.

In the business and professional worlds accuracy in figures is a *sine qua non*. From the young boy who has just entered a grocery as a clerk to the profound mathematician, all are expected to get the correct result every time. To accomplish this everyone along the whole line exercises great care in performing each step of an operation, and then repeats it to check the result. Though twenty years have elapsed, the writer remembers as yesterday hearing the most eminent mathematician that has ever lived in this country say on one occasion: "I have just got a result which is extremely interesting to me, but I must go over my reasoning again to see that there is no mistake. I may have made some slip, and I shall not feel sure it is right till I go over it again." The bookkeeper's accounts, however long, must balance to the cent, and this is accomplished by checking in one way or another, as by double entry or otherwise. The physician's or pharmacist's calculation of his doses must be right to give desired results, and so the calculation is repeated. The surveyor's long calculation of areas must be

accurate, else he loses his reputation at once; hence he always checks up his calculation by totals of latitudes and departures. The expert accountant who prepares interest, logarithmic, or other tables must have every figure correct. The author of a set of mathematical tables recently issued offered one dollar a figure for every figure found wrong in a book full of figures. It is only the schoolboy and often his teacher who sets up another standard, viz., that if at first you don't succeed in getting the answer in the book, try, try again.

One of the chief improvements in arithmetic asked for by the Committee of Ten was accuracy and celerity of calculation. To get this accuracy no plan was proposed other than the multiplication of simple concrete problems. The end proposed was good, very good, but it must be confessed that the means proposed were very general in character, and in themselves gave no assurance that the end would be accomplished.

Of the numerous text-books on arithmetic only a very few give attention to this very practical subject. One author brings into prominence the approximation method of checking. Another proposes to secure accuracy in mechanical calculation by keeping problems well within moderate limits as to difficulty, and then marking everything zero which has a single incorrect figure. Still another early discusses the subject "checks" and leaves the matter there. Now all this is needed and more. In some trigonometries a place and plan for checking are inserted in the model solutions. This course should be adopted in arithmetic also.

Some forms of problem admit of checking by a plan different from that used to get the result; others do not. In the latter case, the problem should be gone over again, once at least, verifying every figure. In the former case, this going over and verifying the problem should be performed first, and then, as a further safeguard, the test should be applied. The reason for this last course is apparent. If a mistake has been made which is found by the test, then the whole has to be gone over again. If, on the other hand, the going over the problem discovers the mistake, time is saved. Of course it is expected that common sense will be applied in all this. If the pupil has

brought himself up to a good standard of accuracy, the going over the figures may be omitted, and only the test applied.

Let us now look into the different ways in which checking may be accomplished.

1. The most important of all is going over the work, this check being always applicable. It has, however, one important defect, viz., if a mistake is made once, there is danger of its recurrence.

2. Verification by approximation in round numbers. Thus if the cost of 2,487 lbs. of coal is asked for, find the cost of  $1\frac{1}{4}$  tons. If the interest on \$789.50 at 7 per cent for 2 yrs., 2 mos., 10 days is desired, find the interest on \$800 at 7 per cent for 2 yrs., etc.

3. Verification of all the fundamental operations by casting out the nines. This test is very convenient and expeditious to apply, and should be known to all. In schools it is often explained but seldom applied.

4. Verification of operations by means of the reverse operation. Thus subtraction is proved by addition, division by multiplication, factoring by multiplying the factors together, etc.

5. Verification of problems by seeing whether the answer obtained satisfies the given conditions of the problem. This is the same as the verification of algebraic equations.

6. Verification by using a different method of solution. Thus the aliquot parts method is applicable to a great variety of problems, and can be used instead of direct multiplications and divisions or cancellation. Still other forms of verifying problems might be described, but perhaps the above will suffice. It is evident that to one who is willing to give time to the study of this question, there is more of practical value to be gotten out of it than might appear on the surface.

It is often contended that the teaching of mathematics has an ethical bearing. Suppose we assume that it has. The question arises, Do the too current methods of teaching arithmetic have a helpful or injurious effect on the morals of the pupil? The answer must be, They have the latter. The inculcation of the habit of taking care, on the other hand, is invaluable in other studies as well as arithmetic, and out of school as well as in school. Thus it may happen that bad arithmetic teaching may do much toward harming the lives of great numbers of pupils, whereas good arithmetic teaching may leave its mark in the character of the pupils and consequently on their lives.

## *Moral Training.*

PRIN. J. C. R. JOHNSTON, ALLEGHENY, PA.



PON no other element in a child's education does his happiness and the happiness of those socially related to him so closely depend as upon his morals. As such is the case, it is of prime importance that a true conception of the pedagogical problem should obtain among those who have to do with the education of the young.

At the outset we must draw a clear distinction between moral instruction and moral training. There exists an erroneous belief that the moral welfare of the child can be secured by instruction in moral science. At least almost all our conscious efforts are along that line. But the truth is that moral instruction is only a minor factor in the problem. The prisons are full of people whose moral instruction has been true, but whose moral education is, nevertheless, imperfect.

The only conscious and systematic moral teaching is instruction, and while it is a minor factor it is still worthy of careful attention. The conscience of the child must be enlightened if it is to be a reliable monitor. But at the best it is repressive and negative; it warns us off forbidden ground, but it does not direct us as to the right. We must not confuse the peace that follows the yielding to its warning with the assurance of right doing. It is but the pleasant effect of reaction after pain, or the sense of danger escaped; it is not directive, but pressive.

While example is important, it can hardly be classed as conscious effort. For instance, a good example is not set solely, or even mainly, for the effect upon the observer. Its principal purpose is the benefit to the author. We are sensible of the fact that its value depends upon the attitude of the child and upon his power to draw conclusions. The best example is of no educational value in the absence of the child, and its value educationally varies directly as the attitude of the child. A perfect attitude on the part of the child renders example needless, and a wrong attitude renders it useless.

Still the case is not hopeless, nor to be determined by chance. As there is a predisposing cause of physical health and of physical disease, so there is a predisposing cause of moral health and of moral disease. An ounce of prevention is worth a pound of cure in the one case as in the other. If the wise physician can detect the symptoms of incipient disease, so we can treat moral ills before they bear fruit. The proper time to deal with the murderer is in childhood.

Every child is born with certain active tendencies. All the vices and virtues of his ancestors, whether they were evident or not, are potent for purposes of transmission to posterity. When the final accounts are balanced it will be found that many children have descended from respected murderers, thieves, etc. We may cheat the civil law, but not the law of heredity.

These two sets of propensities in the child require distinct treatment. The evil tendencies must be repressed and the good nurtured. Many things are of great aid which, on the surface, seem devoid of moral significance. It is here that the conscience does its work. It warns the child away from danger. But it is a fine tool, and can be easily dulled. It will not bear overworking.

Happily there is a most efficient aid at hand. Evil depends for its power on the attractive force of immediate pleasure. This attractive power varies inversely as the square of the distance. The child is in slavery to senses and impulses. It has not developed high potentiality. It cannot resist the charm of immediate pleasure. This is the critical stage in the child's moral career. The value of remote good is no aid, because this value depends for its charm upon reflection and conception of remote end. Every child grasps at the "streaked and speckled spheres of falsehood"; he must *learn* by experience, supplemented by reflection, the value of the cubes of truth. It is the wise *man* that "foreseeth the evil and hideth himself," while the simple "pass on and are punished."

It is at this stage that counter-attraction becomes "a very present help in time of trouble." The busy boy is not exposed to the sway of impulse. His energies are devoted to some end. Almost any end will serve the purpose. The important thing

in the escape from the sway of impulse is to rob proximate pleasures of the power they derive from attention on the part of the child. Free the bird from attention to the charm of the serpent and it is safe.

But the case is even more hopeful. If negative counter-attraction and restraint of conscience are so helpful in aiding the growth of good tendencies, how much more so is the positive culture of the conditions of moral health?

A high potential volition is the condition of moral action. It restrains the impulses, and stores up energy of will to be regularly expended on rational lines. The cause of nearly all the unwise and foolish actions in the world is lack of reflection, not positive wrong intention. Men drift into evil step by step. But wise actions presuppose clear ideas of the end of action. Emerson's star is a good hitching post by virtue of the clear idea of ends sought, and the culture of the will through seeking them. It is just this dynamic power of rational action that we want in morals; a weak, flabby will can never be a safeguard to a child. Of course the remoteness of the end is a matter relative to the stage of the child's development. It requires as much volition for a child to "keep his cake" that he may have it at recess as for a patriot to die for his country.

Like common sense, morality is not the result of direct instruction, but is the result of habits of mind and of body. Manual work is ideal in its influence on habits. Here clear ideas of ends must precede all doing. Impulse soon leads to failure,—failure that can be seen and felt. As the conception of end becomes more complex, the volition is extended over a greater period, and the interest of the child is projected to the end sought, the very conditions of wise moral action.

A child whose conscience is aided by even negative freedom from the slavery of impulse has a fair chance against vice; but the child whose conception of future states is clear, and whose volition is trained to a high potential state, is master of the field; vice has no weak spot on which to fix.

## *Seven Year Course of Study: If These Things be True—A Question.*

HENRY SABIN, DES MOINES, IA.



N old New England minister was accustomed to close his sermons in these words, "If these things be true." I thought of them when I read Superintendent Greenwood's articles upon a seven years' course as preparatory to the high school. What puzzles me most is that in all the common school branches he insists that there shall be no abridgment work.

When Superintendent Soldan suggests that for a ward school one text-book in geography is sufficient—and I think Soldan is right—he objects, and insists that both the primary and advanced books are essential.

In the matter of arithmetic he is equally determined that there must be no abridgment. To use his own words, "With reference to arithmetic, I am equally positive that the course should not be abridged, and furthermore that no necessity exists for curtailing it." He states with considerable energy that the Kansas City course is a "strong three-book course, besides all the new fads practiced in Chicago and elsewhere." I own that this last statement surprises me. I was in hopes to find that some of the things useless had been eliminated from his shortened course.

We must look further for the desired information. The really most important innovation is found in his methods of teaching English grammar and composition. Children in the third grade, he thinks, can be made to study words and sentences with the same degree of intelligence and understanding as they study natural objects. In the fourth grade they can be made to grasp the essential functions, use, and syntactical structure of the English paragraph and sentence. This is what we usually call technical grammar, the introduction of which is generally deferred until the child enters the seventh grade. Nothing, however, is here omitted,

as Reed and Kellogg's English Grammars, including the Higher Lessons in English, have been in use in the ward schools for twenty years. If this amount of work in English is well done, and we willingly admit that Superintendent Greenwood is good authority, then we have a new and convincing argument against the prolific use of meaningless language lessons in the lower grades, and in favor of introducing English grammar at a much earlier period than is customary in most schools. To me this seems the most sensible suggestion in this paper.

The charge here is that in the course for grades below the high school, at least one year is entirely wasted; in many schools it is two years. More than this is true. Not only is one year's time thrown away, but when a child is allowed to take eight or nine years to accomplish the work of seven, he necessarily forms bad habits of application, fails in concentration of study, and becomes indolent, if not actually lazy. And worst of all, these habits follow him into business life.

Now it seems to me that, if these charges are well founded, we are fully justified in coming into court and asking that Superintendent Greenwood furnish us a "bill of particulars." Let him state definitely what he considers essentials and what non-essentials in our present course of study for grammar schools.

I am not particularly concerned as to what effect this shortening the grammar school course will have upon the high schools. In my opinion we are paying altogether too exclusive attention to high school work, in proportion to the number of pupils who enter upon that grade. It is a far more serious question which concerns the future of the pupils whose schooling must end with the grammar grade. This Kansas City course may not be a "bob-tail" course, but there is in it an element of hurrying and rapidity which does not conduce to solid mental growth. There are some things more to be dreaded than a "bob-tail" course, and the spirit which would do the entire work of eight or nine years in six or seven is one of them. The element of time is not the most important element in the child's education by any means.



Mind growth is naturally slow. Maturity cannot be hastened. In the excitement of American life it comes early enough anyway. What will be the effect of the present tendency to shorten the educational period of the youth of the land and rush them into active life before nature is ready, is a question which it will take at least twenty-five years to determine. In view of the immense interests which are looming up in the future, and the questions upon the decision of which the existence of the nation may depend, it would seem a reasonable proposition that more time instead of less should be taken, in order that the citizen who is to be the product of the public school may be thoroughly furnished for his work.

### *Three Quatrains.*

#### THE TRUE REFINER OF MEN.

The best in all he ever tries to reach;  
Not to find evil are his forces brought;  
In books, in art, deed, character and speech,  
Gold, and not dross, is the great seeking thought.

#### TO A MORAL ATHLETE.

With anvil'd power hast thou wrought out thy life;  
No lavish, meretricious athlete, thou!  
But bloodless battles, where none saw the strife,  
Have won that holy light upon the brow.

#### NEW HOPE.

Is thy Past gazing with reproachful eyes?  
Thy Present taunting thee with childishness?  
The Future, still, for good-night solace cries,—  
"In my new morning, on to victory press!"

CHARLOTTE FISKE BATES

*Editorial.*

IN the death of Frank A. Hill, late Secretary of the Massachusetts State Board of Education, the public has lost a faithful and valued servant. For nine years, with intelligence, diligence, modesty and efficiency, he has administered the school affairs of the Commonwealth that is perhaps the most advanced in its educational standards of any in the Union. His record is one of careful attention to details and wise conservation of forces already highly developed, rather than of aggressive and strictly original work. He has had an excellent comprehension of the best educational ideals and has kept the school machinery running smoothly and effectively, so that all parts of the Commonwealth have had the benefit of a broad-minded policy administered by a fair, judicious, level-headed chief official, who was always more interested, if anything, in seeing justice done to the remote and sparsely settled and apt-to-be-neglected districts than to those more favored. Dr. Hill was a lovable man and had few or no enemies. His geniality and modesty were important elements in his success in his high calling. His place will be hard to fill.

In a future number of this magazine we hope to give a fuller account of his life and services, together with a portrait that will be worthy of permanent preservation.

THE effort has been made in certain quarters to show that "the doctors disagreed" in a marked manner in the discussions at the late Boston meeting of the N. E. A. It is pointed out that on most of the themes considered the statements of one paper or address were assailed and perhaps overthrown by the next one on the same subject; that President So-and-So no sooner planted himself squarely on a certain fundamental issue than Superintendent This-and-That arose to prove that such a position was utterly untenable. This is supposed to show that educators are all at sea and that education is in a chaotic state, where no one knows what should be done and where the child is made the subject of all sorts of experiments, many of which are more harmful than beneficial and in the carrying out of which the public money is scandalously wasted.

With this pessimistic view of the case we take issue. We believe that the so-called facts which constitute the major premise are

exaggerated and that the conclusion is fallacious. Doubtless there are large divergencies of opinion among leading educators on many important subjects. But the same is true in all professions and subjects of human interest,—the law, medicine, theology and the sciences. These differences are the signs of life, not death, of health and vigor, not disease and weakness. It would be a tame world if all thought alike on every subject, and a chief stimulus to thought and earnest aspiration would be removed. Out of this seething cauldron of debate and discussion there is slowly crystallizing the permanent and valuable substance of an exact science. The time may never come when everything will be settled, for life and the struggle to attain are more important than perfect attainment. But principles will emerge. Already enough has become settled to put this great teaching profession on a par with the other learned professions. Let us not be afraid of our disagreements, but rejoice in them as the sign of life,—so long as we remain broad-minded, open to conviction, and courteous to those with whom we differ.

**A**N admitted art of teaching implies some standard by which to measure the efficiency of that art. Successful farming observes certain principles, such, *e. g.*, as those that concern the right rotation of crops; selected fertilizers suited to the grains sown; suiting the crop to the particular soil; times and seasons in planting; sub-soiling and fallow ground; the conditions of harvesting; the self-seeding of meadows, etc.; conditions from whose operation are, in time, derived well-established laws governing seeding, cultivating and harvesting. Carpentry becomes skillful through intelligently regarding the nature and grain of woods, the strength of materials, the relations of joints and braces, cleavage, splicing, cuts, glues, tools, and such like conditions and handling, out of a knowledge of which grows a body of accepted directions for making the working with wood in manufacture effective. The art of healing implies a body of knowledge about health and disease, curative drugs and physiological reactions, diet and exercise, in the light of whose conclusions the art is practiced. The art of music rests upon a knowledge of musical sounds, the scale, the voice, melody and harmony of musical tones, movement and the grouping of tones, chorus and accompaniments, typical musical instruments, etc., which, organized, becomes the science of music.

SO teaching is pronounced good or bad, effective or weak, according as it follows, or does not follow, certain more or less generally accepted principles, sometimes unrelated, again fairly organized into a system,—but in either case forming a standard by which to measure the teaching art. Out of the experience of thoughtful teachers in the past, conclusions have been reached as to the nature of the educational process, the act of learning, the steps and conditions in maturing, the life functions of knowledge, and the instruments of education. The fact that, in the light of these conclusions, the teaching may be thought good or poor, presupposes some standard of efficiency for fixing its quality. The standard may be a very simple one or more elaborate, but, if the teaching act be purposeful and orderly, the rules of procedure constitute a potential science having the school practice as an art. No great system of philosophy has been propounded that has not had its direct or implied dictum on education. Eminent commentators and essayists have found it a fruitful theme, as witness Luther, Milton, Bacon, Kant, Goethe, Carlyle, Emerson. It has been a recurring and cherished thought of poets, great and small. During the last generation such books have multiplied amazingly. Their writing and publication show the confidence of thoughtful and scholarly people in the validity of certain postulates as fundamental in explanation of the art. That many of these utterances are discredited by some, and that, as a body, there is much disagreement as to a statement of principles and organization of materials, does not impair the argument. Good teaching may be justified, and poor teaching improved, by regarding certain dicta derived from thoughtful experience.

AS illustrating what has been said above, the comparison of civilization and education is interesting. Indeed, education may be taken as the generic term, naming a process which, in the individual, is called development; in the race, civilization. Without the former, the latter could not be. The improvement of some, of a considerable number, in a general way, of all the individuals of the race, is necessary, if the race is to advance. The very unequal development of the constituent members, and their often antagonistic and obstructive growths, make the civilizing process slow, inconstant and wayward. It is one of the great problems of schooling—how to bring all of the youth, and the adults too, under the wholesome influences of a far-seeing and provident training. This is the problem that faced

Charlemagne and King Alfred, and the great rulers of all times and nations, as their purposes looked toward the manhood of their subjects. But this development goes on whether it be consciously directed or not. Boys grow to be men; girls come to womanhood. Individual experiences accumulate. Life becomes more complex. Responsibilities increase, they must be met. An adult future must be provided for. Toil in some sort is the portion of each. In the effort to adjust himself to the changing conditions, adjustment becomes easier. Resourcefulness increases, and the more resourceful survive; and in perpetuating themselves, perpetuate this quality. The art of living with others is acquired; and, in time, living upon a little higher plane. Life becomes safer, because living is more considerate. Tools of learning are acquired, and they multiply. Education would seem to be this process of coming to maturity, whether the subject be the individual or the race.

### *Elementary Law in the Public Schools.*

R. B. BUCKHAM, LL.B., SALEM, MASS.

IT is a fact which cannot be denied, that too many subjects are already being brought forward as worthy of a place in the curriculum of our common schools. Many important branches of human knowledge of a more or less special character are even now under serious consideration as meriting a place in the instruction of the young. Doubtless the reader is so familiar with them as to render their designation here unnecessary.

But not the least among these is the all-important topic of the elements of law, and it is on its behalf that the writer wishes to offer a few words. Is it not but just and right that the state should assume to herself the responsibility of imparting to the young in her schools a rudimentary knowledge of the law, at least, since in their capacity of citizens she insists that they shall all be familiar with the law?

"Every man is presumed to know the law," is the axiom upon which the administration of justice is founded for its rights, yet justice itself would seem to demand that, on the other hand, every man should have every opportunity of acquainting himself with what the law of the state really is.

How do people come to know as much of the law, and what they may do and what not, as they do? This is a question worthy of serious consideration. In early times the pulpit dealt more or less with

these matters. The Ten Commandments, the elements of the moral law, and the simple responsibilities of individuals toward the state and one another, were often and vigorously discussed. But in these days the preacher is devoting himself to larger and loftier themes, in the main, upon the belief that these matters are fundamentals, understood and familiar with all.

In the home, also, it can hardly be said that instruction in these things is given. No, the young must glean such knowledge as they have of them from varying and uncertain sources, a little here, and a little there. And the wonder is that they acquire as much familiarity with them as they do.

From school the boy goes into the engrossing activities of a business career, and after a few years, perhaps, finds himself seated in a legislative assembly, without ever having given the theory of law and government a serious thought, and certainly without having received sufficient systematic training in its principles. Can we look for just and wise laws to be most expeditiously and effectively enacted thus?

When the first missionaries to go to Africa were brought before an important chief of one of the tribes, they were received by that individual with all the pomp of his court, bedecked in paint and feathers, and asked the object of their coming.

They replied, "We have come to teach you the gospel truths and the law of God."

To this his majesty replied with the utmost disdain, "And do you really mean to say that you think you can teach *me*, the chief of this people, anything!"

But the African chiefs lived to learn that the missionaries could teach them, and a great deal, too.

It is hard for one in a position of importance and authority to be brought to the necessity of learning fundamental principles and elementary truths. Shall we not spare our children the humiliation of perchance finding themselves in a similar position? Let us teach them the elements of law and government and statesmanship while they are yet young, in preparation for the call which is quite sure to be made upon them in after life, in one capacity or another.

*Foreign Notes.*

## NOTES ON A STUDY OF GERMAN PEDAGOGY: AFTER M. DA COSTA.

One cannot fail to be impressed with the increasing interest in the international study of education as industrial competition grows keener. Nor is this interest surprising, since national force and skill are justly regarded as outcomes of national education. The studies referred to are very generally statistical or quantitative in character, relating to school methods and equipments or financial resources, and nations are urged to pattern after or emulate other nations without regard to differences in ideals, sentiments and historic impulses which determine both the trend and the effect of educational activity.

But in reality the study by one nation of what another nation is doing can only be fruitful when the doing is related to these general conditions. This truth has been clearly perceived by a French sociologist, M. Da Costa, who has published in the *Revue Bleue* the result of a study of secondary education in Germany from this comprehensive standpoint. Because of the novelty as well as the inclusiveness of his plan it will be of interest to follow the course of his introductory reflections.

M. Da Costa notes at the outset that the inspiring motives and principles of German pedagogy have had a historic development which alone explains their formative influence.

First among these principles he places the patriotic sentiment. This, he says, "if not the only is at least the most effective motive in national education in modern Germany," and he passes in rapid review the great events that gave birth to the sentiment, the wars that secured the political independence of the country, and the triumph which achieved its national unity. The former he notes also coincided with "a magnificent outburst of poetry and eloquence to which the nation owes its spiritual autonomy."

Naturally when for nearly a century all the important events in the political and intellectual life of the people have tended toward an exalted patriotism, this spirit has penetrated the school, which reacts sympathetically to public opinion. This reciprocity is marked in a country in which the schools are controlled by the state; especially if, as is the case in Germany, the state is represented by a dynasty

whose interest it is to foster a pious devotion to the traditions upon which its own power reposes.

Along with this growth of national consciousness and patriotic sentiment there has developed a philosophy of education which bears a distinctive character. "It is," says M. Da Costa, "profoundly religious, realistic and humanitarian." The germ of the three elements is found in Comœnius, who first outlined a general plan of education and who to the realistic method, that is, instruction by objects—of which method he is called the father—added religion as at once the basic principle and crown of all education, and practical morals as the bond of human society. Starting with the system of Comœnius, outlined in 1666, M. Da Costa traces the development of the principles of German education through the practical work of Franke (1663-1727), with whom the religious idea predominated, Basedow (1724-1798), who emphasized the humanitarian tendency, and Pestalozzi, who with Kant and after Luther, stands, says M. Da Costa, "as the great moral instructor of Germany." The spirit which animated Pestalozzi became a living power in the utterances of Fichte, exalting faith and love and thought above the knowledge of what is believed or thought or loved, and the subordination of all the influences which man can exercise to the higher laws of the will. "It should also be remembered," our author observes, "that meanwhile, thanks to the categorical imperative of Kant, Germany had been provided with an official, civic ethics that accorded perfectly with these tendencies," that is, with the tendencies impressed upon it by Pestalozzi and Fichte.

As a result of the national uprising of 1813, what had been hitherto somewhat vague in these religious and moral principles, drawn from so many different sources, became fixed and centered. To quote the words of our author, "The God of Christianity became the God of German Protestantism; the categorical imperative put on a military uniform, and the training of the moral will was reduced to the formation of a patriotic conviction capable of the utmost self-sacrifice." Henceforth the rôle of education is distinctly defined. On one side there is the end to be pursued, definite and alike for all, namely the formation of a moral will whose sole mandate is the service of God and country; on the other, the conviction that the German spirit need only search itself sincerely to discover absolute truth. From these premises it results that the national education should be confined



within the circle of national traditions, and should impose itself upon the pupil with all the force and unquestionable authority of truth.

The survey of the underlying forces in German national education would be necessarily incomplete without reference to Herbart and to Hegel. The former has exercised a powerful influence upon German pedagogy through the multitude of his disciples, although very little of his complicated system has been retained save the distinction between moral training and instruction addressed to the intelligence, with supreme emphasis upon the former. Thus Herbart has reinforced one of the three great principles which determine the national education of his country. In like manner, Hegel, by his glorification of the state, has helped to bind the school still more closely to the government and the monarchy, and has imparted moral prestige even to selfish purposes born of the triumph of arms. It is to be further noted that in the German system dogmatic religion is the center around which the moral ideas are developed. This responds at once to the need of faith inherent in the German spirit and to national tradition, and it is moreover, as experience has shown, a marvelous instrument of discipline.

Whatever be the differences between German philosophers and their systems they all end as regards the application of their teaching to education in the same trinity, *i. e.*, country, church, state, which words sum up also the philosophy of the national system of education.

It is natural that a French author should place in juxtaposition with these words the legend that is inscribed on every French school, Liberty, Equality, Fraternity. Symbols are these words, also, of a political and philosophic development which has stamped itself upon a national system of education. Evidently as the two nations have moved in different planes neither could assimilate the educational forms of the other. Herein lies the significance of the study whose standpoint is here briefly indicated. Having this well defined, the author proceeds with the account of the particular institutions he has personally investigated, which account may be considered hereafter.

It is enough to note at this time, without offering any opinion as to the soundness of M. Da Costa's analysis, that it is only when viewed thus against the background of national conditions that particular institutions can be comprehended and distinction drawn between elements in them of universal value and those which would lose all value if transplanted.

A. T. S.

## Book Notices.

NOTE.—The number of books now published monthly is so large that we shall hereafter adopt the plan of promptly acknowledging by title, author, publisher and price, all books sent us for review; and later, as space is available, give more extended notice to such as seem most likely to be of interest and value to our readers.—*Publishers EDUCATION.*

**A Short History of Rome.** By W. S. Robertson. This is written on the same lines with the author's "Short History of Greece," to which it forms a companion volume. The author's style is interesting and of a kind to hold the youthful student when plodding through his prescribed course in preparation for entrance examinations. The personal factor is made dominant, and this to youths is always absorbing and enticing. Longmans, Green & Co.

**Laboratory Manual of Physics.** By Henry C. Cheston, Philip R. Dean, and Charles E. Timmerman, of the New York City High Schools. There are seventy-three experiments in this little manual, and they are all that is desired by the New York State Regents and Harvard University. The course is sufficient for one year and affords a broad basis for teaching. Nearly one half of the experiments are adapted to be performed by the class and recorded in a note book. It is a thoroughly practical manual and eminently usable. American Book Company.

**Boston Collection of Kindergarten Stories.** Written and collected by Boston kindergarten teachers, these stories are now enjoying a wide use, and a new and third edition is put on the market. The stories are charming in plot and interesting in matter, while in manner of telling they are models. There are no better stories for kindergarten use than these; their use in the home will greatly interest and delight children. Boston: J. L. Hammett Company.

**Special Method in the Reading of Complete English Classics.** By Charles McMurry, Ph.D. This is one of the most striking contributions made to the study of literature in the grades of the common schools. Dr. McMurry has made a specific study of the needs of the use of literature in schools and has set forth with great deliberateness and clearness the methods by which this study may be pursued along right lines. There is more and more growing into the schools the employment of literature as a study, but little attention has been given by those having the right and the power to give it, little instruction for the prosecution of this study. It is being done in the schools in a loose, haphazard sort of way, with small method or wrong one. Dr. McMurry seeks to give to teachers first a reason why this study should be carried on and then how it should be done. The titles of the chapters will show somewhat of his treatment of the subject; educational value of literature; use of masterpieces as wholes; literary materials for the five upper grades; classroom method in reading; the value of classics to the teacher; and a full list of books suitable for use in each grade. This is a book that should be in the hands of every teacher in the land. It is an inspiring, suggestive, hopeful and helpful work, replete with solid and best thought and kindest information and direction. The Macmillan Company. Price, 75 cents.

**German Books.** *Anno, 1870.* By Detlev von Liliencron. Selected and edited, with introduction, notes and vocabulary, by Dr. Wilhelm Bernhardt. Three sketches are included in this edition, taken from the author's famous "Kriegsnovellen." Dr. Bernhardt has admirably adapted the selections for school use. D. C. Heath & Co. *Wallensteins Tod.* By Schiller. Edited, with introduction and notes, by Charles A. Egbert. This greatest of German dramas, "the most splendid specimen of tragic art the world has witnessed," is most carefully edited by Dr. Egbert, his introduction being a masterly exposition of the play and its setting. The notes are exhaustive and scholarly. D. C. Heath & Co. *Elementary German Reader.* By Frederick Lutz. A strong, carefully graded, admirably edited collection of prose and poems, adapted for use for students in the first two years of their course in German. The text ranges from easy fables to selections from historical writings. A full vocabulary is given and the notes are entirely adequate. A thoroughly practical, interesting, usable book. Silver, Burdett & Co. *Commercial German.* By Arnold Kutner, of the High School of Commerce, New York City. This book is adapted for use in commercial schools and in commercial courses in high schools. The arrangement is most cleverly done. The first part contains the elements of commercial German. Each of the sixteen lessons includes a reading lesson, special vocabulary, exercises on grammar and questions; the second part consists of reading selections dealing with German business customs and institutions. It contains also a study of commercial correspondence, business forms, documents, newspaper articles and advertisements. This is the first book put forth to introduce American students to the German language by means of its commercial vocabulary, and is an admirable and serviceable book. American Book Company.

**Barnes's New Histories of the United States.** The elementary history has been entirely rewritten by Dr. James Baldwin, and tells the story of our country as it should be told, in a series of biographies of important men. Dr. Baldwin is a most delightful writer and he has made a history that will find favor in the lower grades of the grammar schools. The larger history has been most carefully revised and brought down to date, and is now one of the completest and most satisfactory published. Time was when Barnes's was the most popular history in use; with this revised and new featured book there is no reason why it should not secure a new life and maintain its proud position in the schools. It is a peerless school history. American Book Company.

**Selections from Latin Prose Authors.** By Susan B. Franklin and Ella K. Greene. These are some seventy odd selections which are designed for sight reading for students in the last year of a college preparatory course. The selections have been taken from Cæsar, Cicero, Livy, Sallust, Pliny, and Velleius Paterculus. The notes are very meager and no vocabulary is furnished. American Book Company.

**English Classics.** *The Princess.* By Alfred Tennyson. Edited with an introduction and notes by Edward Everett Hale, Jr. University Publishing Company. *Idylls of the King.* By Alfred Tennyson. The Idylls selected are "Gareth and Lynette," "Lancelot and Elaine," and "The Passing of Arthur."

These are edited, with introduction and notes, by Sophie Chantal Hart. *Oliver Goldsmith*. By Washington Irving. Edited, with notes and an introduction, by Lewis B. Semple. Longmans, Green & Co.

**The Light of China.** By I. W. Heysinger, M.A., M.D. A metrical rendering of the great Chinese classic "T'ao Teh," made after years of critical study of all accessible authorities. This remarkable work of L'ao Tsze, written six hundred years before Christ, and antedating Confucius, is the basis of the Taoist religion. It has been the endeavor of the author to make a strictly faithful translation. With its analytical index and special vocabulary, it is a highly interesting study for philosophers, theologians and sociologists, to whom it presents much food for thought. Philadelphia: Research Publishing Company. Price, \$1.25.

**Lizette.** A Story of the Latin Quarter. By Edward Marshall. Entertaining and well told. The plot is strong and finely developed, but the close is rather abrupt and not altogether satisfactory. Psychologically the leading characters are highly improbable. Ethically the story may suit a journalist of the sensational order, but it is not conducive to a true conception of love in its relation to other virtues, nor helpful to American home life. New York: Lewis, Scribner & Co. Price, \$1.50.

**James' and Mole's Dictionary of the French and English Languages.** Rewritten and enlarged by Louis Tolhausen and George Payn. It has been made to conform with the changes in both languages that have occurred since the work was first published. Phrases in common use have also been included, and thus over three hundred pages have been added. The size is convenient, the type is clear, and the work is very compact and well arranged. New York: The Macmillan Company. Price, \$1.50.

**Matthew Arnold's Essays on the Study of Poetry and A Guide to English Literature.** This is one of a series of choice literary selections in dainty form and cloth binding, suitable for the corner shelf. It has a fitting place in every select private library. New York: The Macmillan Company. Price, 75 cents.

**Burke's Speech on Conciliation with America,** with Introduction and Notes, for the use of Academies and High Schools. By Joseph Rushton, L.H.D. Admirably arranged for students' use, and handsomely printed on good paper, though the notes should have been in larger type. On the whole, it is a very desirable edition. Chicago: Ainsworth & Co. Price, 25 cents.

**Shakespeare's Midsummer Night's Dream,** with Introduction and Notes by Laura Emma Lockwood, Ph.D. This is No. 153 of the well-known "Riverside Literature Series." It contains a useful appendix for studying the play with reference to clearer general understanding and to amateur presentation. The work of the editor is of a high order. Boston: Houghton, Mifflin & Co. Price, in paper covers, 15 cents.

**As It Is in the Philippines.** By Edgar G. Bellairs. A journalist's racy account of men, places, and affairs as he sees them. It is apparently a collection of newspaper contributions, in which a generally pessimistic criticism is made of everybody and everything connected with civil affairs, even in trivial matters.

It is a fine example of the limitless conceit that a reporter must obviously know more accurately, understand more thoroughly, and be able to advise more wisely than anyone else, and especially than any duly authorized official. Praise and blame are curiously intermingled in the evident effort to show that the Government usually blunders, and that most officials are incompetent or unworthy. New York: Lewis, Scribner & Co. Price, \$1.50.

There have come to hand several issues of *Knowledge*, an illustrated magazine of science, literature and art, founded by Richard A. Proctor, and published in London. It is a most valuable periodical of high grade, and while astronomy is prominently treated, the other sciences are given much space, particularly microscopy, botany, ornithology, and zoology. Price, sixpence per single copy.

**Honor Dalton: A Novel.** By Frances Campbell Sparhawk. Miss Sparhawk is well known as a writer, and needs no introduction. This is perhaps her most pretentious effort. It is an interesting story of events which might take place in the lives of cultivated people in any American town or city. The dramatic elements that enter into most lives in one form or another, even those that are to outward view commonplace, are traced in this story with the skill of a careful and painstaking observer. The thread of love runs through the book in a conspicuous yet delicate way. In fact, the analysis of human affections and the delicacy and beauty of the love passages are a chief charm of the story. Its tone is pure and ennobling, and there is not one coarse strain from beginning to end. It is a novel which can be safely put into the hands of fairly mature young people, and it will help them in forming high ideals. New York: Fleming H. Revell Company. Price, \$1.50.

**Quantitative Chemical Analysis.** By Frank Julian. This is a text-book of some six hundred pages, octavo, and is abundantly illustrated. It treats in a manner most exhaustive, and far more complete than other text-books on the subject, the art of ascertaining the relative proportions of the constituents of any form of complex matter through the application of physical forces aided by chemical reactions. Without question this stupendous work will meet with the favor its worth merits, and become the reliable standard in chemical laboratories. Its price is \$6 net. St. Paul: The Ramsey Publishing Company.

**Problems in Arithmetic.** By Gordon Southworth. In this we have a carefully selected and graded collection of problems, for use in the grammar grades, and designed for use and not for admiration nor for guessing matches. Mr. Southworth knows what pupils actually in school need to stimulate them to further and better work in dealing in numbers, and he has made a book of problems that will delight the heart of every teacher. Boston: Benj. H. Sanborn & Co.

**The Children's First Story Book.** By May H. Wood. This is a little work of some eighty pages and is designed to be used as a first supplementary reader. The little stories are carefully graded and the new words are introduced slowly and naturally. It is a new idea to have a first reader that may be used entirely as a supplementary book, and it is a good idea. Primary teachers will give it a cordial welcome. American Book Company.

**Differential and Integral Calculus.** By Virgil Snyder and John Irwin Hutchinson, of Cornell University. This is the latest addition to the Cornell Mathematical Series and has been prepared to meet the demand for a brief course in both differential and integral calculus. While based upon previous volumes of the series, yet the part on the integral calculus has been written anew, and the exercises are new throughout the book. The treatment seems to be simple and practical, a satisfactory condition to the novice in the study of calculus. American Book Company.

**Greek and Roman Stoicism.** By Chas. H. Stanley Davis. Dr. Davis has herein set forth with admirable clearness and keen appreciation the philosophy of the Stoics and some of their disciples, and has made a thoroughly enjoyable and profitable book. The reader will find much of the philosophy to be current cant of the day and some of it to be embodied in the wisdom of the clever; it is mainly interesting as showing the principles and faith of those following the cult to its ultimate analysis. In the book selections are appended from the writings of Epictetus, Seneca, and Marcus Aurelius. The volume is a fine specimen of good book-making. Boston: Herbert B. Turner & Co.

**Studies in Zoology.** By James Merrill. Dr. Merrill is director of the science department in the State Normal School, Superior, Wis., and out of the abundance of his teaching and laboratory work has he made this guide. It is suited to all grades of the high school; it deals with typical forms that are easily procurable. It is a thoroughly practical and excellent guide to the study of zoology. American Book Company.

**Spanish Books.** *Cuentos Castellanos.* There are eight of these stories, selected from the best-known writers of Spanish short stories; they afford excellent variety in style and reading matter to students. The editors, Nary D. Carter and Catherine Malloy, have prepared a complete vocabulary and some interesting notes. D. C. Heath & Co. *Marianela.* By Benito Perez Galdos. Edited by Edward Gray. This is a tender and pathetic story of modern life in Spain, and will strongly appeal to every student of Spanish. It is one of Galdos's best and is written in the clearest and purest style. For first year students in Spanish it will be found to be admirable. *Electra.* By Galdos. Edited, with notes and vocabulary, by Otis G. Bunnell. This drama was first presented at Madrid on January 30, 1901, and made a deep impression on the Spanish people. It was written to give expression to the author's ambition for his country and his countrymen, and to urge them to social and political renovation. It is especially timely and interesting to American readers as showing the contemporaneous trend of opinion in Spain. American Book Company.

**Ceres and Persephone.** By Maud Menefee. This is a play in verse which the author states has grown out of the study of the Greek myths with a group of children. It is all very charmingly done and quite in the spirit of the delightful myth. There is added the "Hymn to Demeter," translated by Andrew Lang. The book is exquisitely illustrated by Ralph Fletcher Seymour, by whom it is published at 1010 Fine Arts Building, Chicago, Ill.

We have received the *Report of the Librarian of Congress for the Year Ending June 30, 1902*. Mr. Putnam's reports are always scholarly and valuable as contributions to the care and use of libraries.

**French Books.** *Les Aventures du Dernier Abencerage*. By Chateaubriand. Edited by James D. Bruner. This edition is prepared for rapid reading in the first year of the course. The style is easy and simple, and the subject matter holds the student's attention. *Le Gendre de M. Poirier*. Edited by Edwin C. Roedder. This is deemed the brightest and best of Augier and Sandeau's comedies. It is recommended for reading by the Modern Language Association. American Book Company. *Cinna*. Edited by John E. Matzke. Corneille's tragedy stands unique among plays and demands cleverest scholarship, and erudition to properly present for students' use. Dr. Matzke has made an admirable series of notes that will serve well the student in mastering this famous play. D. C. Heath & Co.

**Horace's Odes and Epodes.** Edited by Clifford H. Moore, of Harvard University. Here are presented Horace's lyrical poems, with special attention to the needs of freshmen and sophomores. The notes, introduction, and commentary are unusually comprehensive and full, and give much assistance in the interpretation and appreciation of Horace's poetry. It is a strikingly strong and scholarly work. American Book Company.

**Practical Language Lessons: Advanced English Grammar.** Two books upon grammar have recently come to the editor's table, both of which, while very unlike, deserve more than passing mention. The one is "Practical Language Lessons," by W. C. Sayrs, the other, "Advanced English Grammar," by Wm. T. Harris. The former is based upon the text of Longfellow's "Evangeline" and upon a selection from Prescott's "Conquest of Mexico." The leading characteristic of the exercises is found, as the preface expresses it, "in the fact that they are based upon the connected text of a classic." Much importance is attached to the practice of speaking. A Study of Sentences, a Study of Words, and Construction constitute the bulk of the text. Thirty pages of outlines for composition include material to be used along with the other sections, and the "Elements of Grammar," condensed to forty pages, the author includes "for reference." The book should afford helpful suggestions to teachers in the adoption of other selections than those here employed. The second book, named the "Advanced English Grammar," is distinctively a text for maturer study of English. The exercises are systematically ordered and attractively presented. Extracts are presented from standard literature. Numerous illustrations are given of word uses and sentence structures. The frequent cross references make the entire book usable for the study of any given form. The definitions "invariably follow a preliminary study," and do so really, and not merely nominally. The text is an admirable systematic presentation of technical grammar for advanced pupils in the public schools. Practical Language Lessons, by W. C. Sayrs, Lothrop Publishing Company, Boston. Advanced English Grammar, Wm. T. Harris, Globe School Book Co., New York and Chicago.

**Guide Right: Ethics for Young People.** By Emma L. Ballon, with illustration by Effie Louise Koogle. A series of thirteen lessons in story form on such subjects as obedience, kindness, honesty, temperance, work, courage, and conscience, and intended for very young readers. The book is readable and helpful. The stories illustrate the effects of wrong conduct rather than the rewards of goodness. Lebanon, Ohio: March Brothers. Mailing price, 40 cents.

Two little pamphlets, *Cœur de Noel* and *Materials for French Composition*, by L. D. Ventura, are for advanced students of French. The *Cœur de Noël* is an entertaining sketch of Italian life in Boston, while the other pamphlet consists of a series of exercises based upon it, and involves practice in idiomatic and difficult constructions. San Francisco: A. M. Robertson. Price, 25 and 15 cents respectively.

**Ausgewählte Beiträge zur Kinderpsychologie und Pädagogik.** By Dr. G. Stanley Hall, translated into German with an introduction, notes, and additions by Dr. Joseph Stimpff. Certainly no one in America surpasses Dr. Hall in sympathetic, thorough, scholarly investigation of child-life and pedagogics, and it is no small pleasure to have his standing recognized abroad. We particularly rejoice to see these select essays translated and annotated under the critical care of Dr. Stimpff and the editorship of Rector Ufer. The volume will undoubtedly be esteemed authoritative, and an invaluable help to students of psychology and pedagogics. Altenburg: Oscar Bonde.

**Volume I of the Annual Report of the Commissioner of Education** for the year 1900-1901 presents as prominent features papers relating to education in the South and in Europe; but many briefer contributions are of great value, such as "Noires Logos Theory," "Temperance Instruction," "Educational Pathology," and "The Carnegie Institution." There are also several highly instructive diagrams of school statistics from 1870 to 1900.

We have received from the Philadelphia Commercial Museums a copy of "**An Illustrated Guide to Caracas**," first issued in 1896, but of renewed interest at the present time. It presents a careful and extended description of routes, places, and necessary expenses. There are many fine full-page illustrations, much important historic information, and several pages of conversational vocabulary for the use of the traveler.

**Machine Shop Arithmetic.** By Fred H. Colvin and Walter Lee Cheney. This is the third edition of a little book for the pocket of the practical machinist who has not had the advantage of technical instruction. The applications of arithmetic to the simpler operations of the machine shop are explained in simple, every-day language that the workman will appreciate. These explanations and a number of tables of special calculations make the book very valuable. In order to avoid misunderstandings, however, some statements should be grammatically revised. New York: The Derry-Collard Company. Price, 50 cents.

**The Real Benedict Arnold.** By Charles Burr Todd. A dispassionate and therefore just statement of the life, character, achievements and downfall of Arnold. It is valuable as history and as a study of human nature. The sus-



ceptibility to wrong action on the part of one, and the injustice of total and bitter condemnation on the part of many, are made manifest. The blindness and conceit of wounded pride, the devotion of a true husband, the love of country, the rashness of inordinate ambition, the penalty of retributive remorse, the relentless indignation of an outraged people, and the obscuration of eminent service and patriotic impulse by one act of personal revenge and misguided treachery, combine to teach lessons both sad and real and profitable. The book will help to a fairer estimate of its subject. New York: A. S. Barnes & Co. Price, \$1.20 net.

**How to Keep Well.** By Floyd M. Crandall, M.D. This title tells the character of the volume. It is surprising how much ignorance there is of the common laws of health. Practical suggestions are made in this book by an experienced physician. The language is untechnical, and can be understood by any intelligent reader. Whoever reads the book will understand better the causes of disease and the best means of prevention and cure. This means that the reader will be healthier and happier, and will consider the \$1.50 paid for the volume the lowest doctor's fee on his cash book. New York: Doubleday, Page & Co.

**Young People's History of Holland.** By William E. Griffis. This volume gives in an entertaining and instructive way the story of an interesting people. It tells how they diked their land and turned a swamp into a garden, where they built up a prosperous and liberty-loving commonwealth. Many noted names are introduced to the reader,—Erasmus, William of Orange, Alva, Parma, Grotius, Spinoza, etc. If all books of history could be made as alive as this one the subject would attract everyone. Boston: Houghton, Mifflin & Co. Price, \$1.50 net.

**On Satan's Mount.** By Dwight Tilton. This book describes the conflict between labor and capital. The characters are strongly drawn, and the story is full of life and movement. A tale of love is interwoven. The reader will gather some right impressions in regard to the irrepressible struggle between the rich and the poor classes of society, and will regret that he is not told a little more definitely about the ultimate happiness and usefulness to the cause of the hero whose fortunes he has followed through 459 pages. Boston: C. M. Clark Publishing Company. Price, \$1.50.

**The Annie Laurie Mine.** By Rev. D. N. Beach, D.D. Dr. Beach's book is somewhat out of the common. Some will think it too "preachy." But it is a strong story with a healthy and invigorating atmosphere. It teaches the great lesson that Christianity can be carried into business. The character of "Bonaparte Sharp" is well drawn and highly original. We are inclined to criticize the treatment which he finally receives at the hands of the hero of the tale. The plot requires his downfall, but as the hero is pictured as an ideal Christian we think he should have made some loving and prayerful effort to win and save the "Napoleon of Finance" instead of laughing inordinately when he was worsted. Boston: The Congregational Publishing Society. Price, \$1.50.

**Tsimshian Texts**, by Franz Boas, is Bulletin 27 of the Bureau of Ethnology of the Smithsonian Institution. It consists of a carefully edited series of myths in the original text with a literal interlinear translation, and a full and clear translation above the text. These are followed by a number of supplementary stories and abstracts. The work will be prized most by ethnologists and philologists. Some of the stories might be retold for youngest readers, but in the main they are weird and crude.

To accompany Moore and Miner's "Accounting and Business Practice," Messrs. Ginn & Company, Boston, have issued a series of **Blanks, Blank Business Forms, and School Currency**. They are arranged in sets to correspond with the several parts of the text-book, present every variety of form required for the practical work of the pupil, are excellent in make-up and material, and are reasonable in price, which varies with the size and complexity of the set.

**The Method of the Recitation**. By Charles A. McMurry, Ph.D., and Frank M. McMurry, Ph.D. A revised and improved edition of the book published first in 1897. It is based upon the ideas advanced by Herbart, Ziller, and Rein, but generalized and developed to meet the needs of American conditions. The work is logical throughout, and presents, explains, and illustrates in a clear, interesting manner the essential importance and relations of induction, deduction, and general and individual notions. The teacher is practically taught how to apply the principles of method to the problems of instruction. The book is timely and finely adapted to the working library of the teacher as well as to use in teachers' classes. New York: The Macmillan Company.

**The Child Housekeeper**. By Elizabeth Colson and Anna Gansevoort Chittenden. Introduction by Jacob Riis. The book is one of practical instruction in the homely duties of every-day life, like building the fire, making the tea, setting the table, washing the dishes, "minding" the baby, etc. In the main the teaching is judicious. The chapter on washing clothes directs that they be taken from the boiler direct to the bluing water, a "trick" which almost every good housekeeper often suffers from at the hands of incompetent servants, but which no good housekeeper ever permits. We wish the boys as well as the girls had been recognized in the book, for we thoroughly believe in the value of practical manual training in the home for both sexes. New York: A. S. Barnes & Co. Price, \$1.50 net.

We have received the following books for review in EDUCATION:—

**Animal Studies**. By David Starr Jordan, Vernon Lyman Kellogg, and Harold Heath. D. Appleton & Co.

**Greek Lessons for Beginners**. By Frederick Stillman Morrison and Thomas Dwight Goodell. D. Appleton & Co. Price, \$1.10.

**Language Lessons from Literature**. Book I. By Alice Woodworth Cooley. Houghton, Mifflin & Co.

**Agriculture for Beginners**. By Charles William Burkett, Frank Lincoln Stevens, and Daniel Harvey Hill. Ginn & Co.

*A First Latin Book.* By Clifford Herschel Moore, Ph.D. D. Appleton & Co.  
*Principles of English Grammar.* By J. N. Patrick, A. M. J. B. Lippincott Co.  
*The Jones First Reader, The Jones Second Reader, The Jones Third Reader, The Jones Fourth Reader, The Jones Fifth Reader.* By L. H. Jones, A.M. Ginn & Co.

*The British Nation.* By George M. Wrong, M.A. D. Appleton & Co.

*The First Six Books of Virgil's Æneid.* With introduction, notes and vocabulary. By Jesse Benedict Carter. D. Appleton & Co.

*The Rational Method in Spelling.* By Edward G. Ward. Silver, Burdett & Co.

*The Rational Method in Reading.* Fifth Reader. By Edward G. Ward. Silver, Burdett & Co.

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## CONTENTS

|                                                                          |     |
|--------------------------------------------------------------------------|-----|
| Education as a Scientific Pursuit. <i>Edward Franklin Hocking, Ph.D.</i> | 129 |
| In the Fall. (Poem.) <i>Helen Cary Chickwick</i>                         | 147 |
| The Imagination as a "Practical" Faculty. <i>Caroline Stedman</i>        | 148 |
| School as a Pioneer Educator. <i>Anna Russell Mayale</i>                 | 152 |
| The Higher Education of Boys. <i>John William R. Casselton</i>           | 167 |
| Hon. Frank Alpine Hill, LL.D. <i>Ray Greene Huling</i>                   | 178 |
| Editorial                                                                | 183 |
| Foreign Notes                                                            | 188 |
| Book Notices                                                             | 190 |
| Periodical Notes                                                         | 192 |

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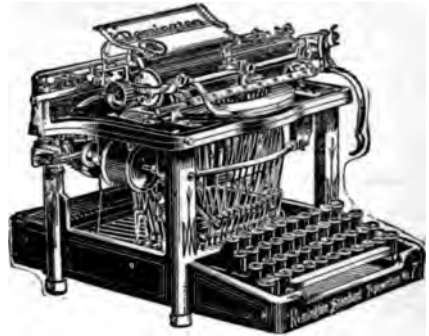
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The Association of Mathematical Teachers in New England will meet on Saturday, Nov. 14, at 11 o'clock in the building of The Browne and Nichols School, 20 Garden St., Cambridge, Mass. Mr. G. W. Evans, of the English High School, Boston, will read a paper on "Graphical Representation in Arithmetic and Algebra," and Dr. E. V. Huntington, of Harvard University, will give a short account of Holzmüller's Stereometry.

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In **EDUCATION** for December we shall present some very interesting statistics furnished us by Dr. Wm. T. Harris, of the Department of Education, Washington, relating to the question of "Free Text-Books in the Schools of the United States"; Mr. S. Edward Warren, C.E., of Newton, Mass., will discuss "The Co-ordination of Polytechnic Schools"; "Problems in High School Curricula," will be the theme of Professor John W. Wilkinson, of Alva, O. T. Professor Frank Webster Smith, of Lincoln, Nebraska, will present a timely article on "Education at American Expositions"; and Professor S. J. Hunter, of the University of Kansas, will treat of "The Study of Animal Life; Its Place in the Public Schools." These articles, all original and up to date, will make this number of **EDUCATION** especially valuable.

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A National Conference on Secondary Education and its Problems called by Northwestern University, met in Evanston-Chicago on Friday and Saturday, October 30th and 31st, 1903, at the same time as the celebration of the Fisk anniversary.

The following were among the topics suggested: 1. In view of the remarkable and ever-increasing growth of the public high school, what is the place of the private high school or endowed academy in our system of education? 2. Is it desirable that the public high school should assume any responsibility for the moral and religious training of its pupils? and if so, what is possible and advisable in this matter? 3. Should the public high school be looked upon primarily as a school to prepare young men and women for the college and university? or should it be viewed as an independent school with its own important ends and aims, to which preparation for higher institutions must be strictly secondary? 4. If the latter is the correct view, what is the effect of the system of accredited schools adopted by the state universities and the leading private universities in the Mississippi Valley? Does not this system tend to subordinate the high school, and force it into the position of a mere preparatory school for these institutions? 5. If this view of the independent character of the high school is a correct one, should the college frankly recognize the altered situation and accept any curriculum which the high school works out as suitable for its purposes, as also suitable preparation for the college and university?

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## *Education as a Scientific Pursuit*

EDWARD FRANKLIN BUCHNER, PH.D., UNIVERSITY OF ALABAMA



THE last half century or more has revealed great outbursts of interests in every form of education. Not only have these outbursts appeared and effected reforms, but the interests have been cumulative in their power. In the present decade our pedagogical passions have become intensely consuming. There is grim determination written across the face of every school community. Citizens are demanding a more vital and practical training for the children of the state. Educational leaders are multiplying schemes for responding to these public demands, while teachers are flitting to and fro, and expending their well-worn energies in making efforts to fit themselves anew to the demands of the hour. Schools and school studies are multiplied in number. The total enrollment in the secondary schools, for example, during the decade has increased eighty-six per cent. The percentage of increase of students in these schools taking the so-called secondary studies during the ten years has been more than one hundred per cent, on the whole, reaching as high as one hundred and seventy-four per cent in the case of Latin, and one hundred and forty-seven per cent in the case of geometry. The proportionate number of students taking Greek in these schools is eight per cent greater than the proportionate increase in the total enrollment during the decade.



Established institutions of learning, on the other hand, have created a veritable field of competition in trying to provide substantially for an academic recognition of education. Trustees and professors are surmising that education, even, may be made a "liberalizing" study. On the professional side of these higher interests these institutions have been providing "courses for teachers," establishing chairs for "the science and art of teaching," and forming organic departments in which a full-orbed study of education can be carried on. About one tenth of the total number of so-called normal students in the United States four years ago were pursuing their studies in universities and colleges. Ten years earlier the statistical records made no mention of students of "pedagogy" in our higher institutions!

Again, the history of educational thought and practices is being studied as never before, and great numbers are listening to fresh expoundings of the philosophy of education. Teachers have been led to believe, by the goadings of those who have urged them on, that the repository of educational traditions is a many-doored chamber. Every form of educational effort finds some representation of its material therein. Teachers, however, have not gone to this repository through the impulse of their pedagogical instincts, or the history of education would have been known long before Schwartz, ninety years ago.

If we turn from this more scholastic interest in education, and regard the practical phases of the upheavals and reforms, we find on every hand intenser interests and a more varied expression thereof. There are the educational "committees," to whom is committed authority on certain specialties. There are the conventions, submerging the local and the national teacher alike. There are the round-tables, all maintaining that the teacher should be trained into something more than merely an appreciative state of mind. It would add nothing to our purpose to be reminded of the material interests which have gained in such enormous expressions during these years.

These really violent changes which have appeared, and will continue to appear, in educational thought and endeavor, essentially regarded, are due to an apparent attempt to reconcile the claims of science with the deeds of education. Some time since,

in a conversation with a mature woman, trained and learned in the physical sciences, I was informed of the absolute impossibility of calling education a science, or of its ever possessing a scientific character. The brief, and for her mind, the clinching argument, ran thus: "I have been so long accustomed to the exact sciences that I do not see that you *prove* anything in psychology."<sup>1</sup> As over against this echo from the mathematical view of scientific knowledge, the student of the hour must recognize two things: first, the willingness of educators to look for fundamental principles which shall give birth to rules suggesting an education according to the natural conditions of the human individual; second, the student must at the same time observe a contemporaneous openness on the part of science to appropriate every natural sequence to itself, whether that sequence appears among masses of matter, living cells, or in human history. Hence there has been a gradual admission by many among us that education is open to a treatment similar to that which science tries to give to the material which it has recognized hitherto.

One evidence of this reconciliation, it is well to note in passing, can be found in the usual form of expression prevalent during the last twenty-five years. It has been a well-established custom to speak of "education *as* a science," rather than to say that it *is* a science. Men have not been willing to apply so pretentious, consoling and convenient a name as science to any and every attempt to expound the uncertain art of the teacher. This mode of expression might even be taken as implying that every systematic statement of law and maxim which has relation to the task of educating is really specious. One could follow along this line and easily work out very serious insinuations against every effort to make the problems of education really intelligible. We may yet have enough occasion to see just how much speciousness there is in the current aspect of education, which shelters itself behind the all-protecting shield of the adjective which appears in our theme. We should not fail to notice, however, a delicate modesty which has pervaded this

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1. I was not insensible to the double thrust at both pedagogy and psychology made in this criticism.

pedagogical attitude. It has a better side, in which the claim of the educational aspirant merely reads thus: In all treatment of educational problems one should insist upon "the utmost precision and rigor in the statement, deduction and proof" of the various conclusions which represent the intellectual side of educational activity.

Every consideration of the general problem in hand should circumspectly address itself to a double point of view. Can education be scientifically studied by any person? Is it amenable to the methods of science and scientific thinking? One might determine this special problem *in posse*. He could show the abstract possibilities of a science of human culture. The long list of workers in this field—to mention only Comenius, Rousseau, Kant, Fichte, Schliermacher, Herbart, Dittes, Spencer, and Dilthey—fully attests the fact that educational theory has not yet reached its sure foundation thus suggested. A pedagogical science that shall be universally valid is still a quest for those who would build it up through historical negation.

Since education, however, is a particular vocation, and at the present period of civilization teaching has become the life interest of real human beings, the theoretical determination of a universal science of education does not acquire validity until it is adjusted to this question: Can the teacher, as a teacher, study education scientifically? Can the spirit and the attitude of this modern form of inquiry enter into the intellectual make-up of the average teacher? What is there to hinder a scientific study of his own activity? This complex problem might be expressed in a somewhat different way: Can the training of the teacher be given a thoroughly scientific character, vouchsafing especially desirable results in his work as a teacher? The more practical reading of this statement would be as follows: Can the teacher who mans the schools of to-day be led to acquire scientific methods and to appropriate scientific results? This, it is obvious, is the purely pedagogical question of adapting the exponents of an earlier age to the demands of the present,—which lies to one side of our immediate purpose. Theoretical determinations could not throw very much light upon the point. The pooling of experience alone can be of vital service in reaching conclusions here.

These historical illustrations indicate that we are on ground which invites inspection. In spite of the warnings from all sorts of quarters, let us make our start with a few theoretical determinations. Education scientifically pursued must be represented by some form of knowledge. The adjectives imply not so much a quantitative estimation of the amount of knowledge as a qualitative determination of the knowledge involved. Generally speaking, the representative of educational science must at least know that which is to be done in any act of teaching. In some instances, the knowledge involved is that which constitutes the topic of instruction; in others, it comprises a knowledge of how some things can be done.

There are three sorts of knowledge which appear in human experience with their respective claims.<sup>2</sup> These three sorts of cognition may be grouped thus: There is first the knowledge of the common man, who offers his independent judgments respecting the qualities and behavior of things; secondly, there is the knowledge of the philosopher, who attempts to make absolutely universal judgments respecting the forms and contents of experience; thirdly, the scientist appears with his affirmations, possessing claims of certainty derived from the quality of method he followed in gaining them. In all these grades the content of knowledge is constituted by immediate experience.

If we read these qualitative distinctions into the conclusions of those who have thought themselves competent, we will discover an interesting interpretation of the field of education. For ages the world has had commonplace superstitions and suppositions. The individual's judgment has never been wanting, and this mental attitude is intensified on every hand at present.<sup>3</sup> For as many ages we have also had the

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2. It is well to remind ourselves at this point that we are borrowing from theory of knowledge for the sake of educational progress, and not creating distinctions that are primarily pedagogical in character. Nothing is more astounding than the intrepidity with which teachers make excursions into foreign fields of thought for the defense of some pedagogical theory. We may, perhaps, not hope to escape this charge in our present proceeding, but we can at least be aware of what we are doing, and thus mitigate the sharpness of any threatening rebuke.

3. It is not implied that a widely sweeping experience is valueless. There is more truth than wit underlying the blank space opposite the word "experience" on every application blank for a license to teach!

philosophical foundations of the teacher's experience and activity explored. It seems to have been in the past much the easiest thing to philosophize upon educational circumstances. Or, as has been more often the case, there has been a predilection for scooping the entire output of a philosophical system into the hamper of the pedagogue, just as though the fundamental criterion of experience, knowledge, and education alike consisted in this,—to tell what a thing is, is to tell how it became. In the present anti-philosophical age we are telling how a thing becomes, in order to know what it is.

Between the particular, individualistic judgment, which varies with every new expression of it, and the universal generalization, which acquires schematic unity, there is an enormous gap. Indeed, is it not necessary for us to see that there is a real danger lurking in a disposition to allow this gap between these historic attitudes to remain open? And how few there are among us who discern this hiatus! The astute claims of some current changes in education are that this gap is being filled through scientific efforts.

In trying to understand the efforts to pursue the problems of education in a scientific manner, we must be immediately assured that the term "scientific" is not one with which we can juggle with impunity. If we entertain fair hopes for ourselves, we must be as respectful to those who possess a method that we would imitate and who have developed a knowledge that we would appropriate. In general, science is supposed to consist in a method of experimentation on the one hand and of proof on the other. This method of experimentation, or science in descriptive terms, is not primarily determined by a widespread sensuous basis in the experience to which it refers. Astronomy, for example, which is considered one of the most exact sciences, is built upon the perception of very small points of light. Yet it is regarded as capable of remarkable proof, including prediction of an unusual sort. This goes to indicate that a science consists rather in the mode of thinking to which any original experience can be submitted. Can we think about education and all that concerns it in a manner comparable with

that mode of thought which the astronomer employs with such success? It is not easy to imagine that pedagogical changes can replace stars and planets in this typical method.

There must also be drawn as clearly as possible a line of demarcation between the scientific modes of thinking in descriptive and in explanatory terms, on the one hand, and those practical categories which are of most value in the concrete pupil-thinking of the teacher, on the other. Undoubtedly the teacher may be informed upon the conclusions of the physical, biological, and the psychological sciences in so far as the material of these is concerned directly in providing conditions for his labor. It is just as true that the teacher must think with reference to the particular ends he has in view. These practical categories are not to be understood as being identical with the basal concepts which are apparent in ethics. In other words, the actual function of the teacher, as teacher, is not ethical, but applicatory. In carrying out this function the teacher doubtless uses descriptions and explanations. He makes reference to causes and effects with a confidence no less overweening than that of the physical scientist. Can the sciences find any place in their respective schemes for such descriptions and explanations as are serviceable to the teacher when thoughtful about the results of his activities with children? From one point of view, at any rate, it is certain that the thought of the teacher about the pupil in school for the sake of school ends cannot, and never will, be made identical, or even parallel, with the thought of the scientist about the selfsame child. We might even ask whether it would harm or benefit the teacher to exchange his categories for those of the scientist, and to think as the latter must think. For the present let us consider the line of distinction between the two as hard fixed.

When one turns to the actual output of educational formulæ, it is soon discovered that there are many points of view from which education has been determined. Some of these are external, others internal. Some are descriptive, others are explanatory. Some place emphasis upon the content or material whose existence in experience furnishes objective grounds for attempts at educating; while others sublimate the individ-

uals engaged directly and concretely, and the subjective processes through which they must pass, in order to reach the definable ends.<sup>4</sup> This variety of notions is rather discouraging. One feels an impression of the impossibility of reducing them all to one generic idea. It seems, in the last analysis, that everything depends upon the individual, and not upon definite, impersonal relations that may be discoverable upon proper investigation. One feature is especially noticeable in nearly all attempts to develop a pedagogical system in the light of some dominant conception. The theories will start with an objective description, and then suddenly adopt a subjective point of view for carrying out the scheme without any apparent memory of the type of thinking which ushered in the system. Can we not expect and demand a certain amount of consistency in our educational thinking? What is the value of all our efforts if we leave them loose-jointed?

It is true that there is one conception which readily spreads over all types and stages of educational activity. That is the idea of growth,—growth of the child, growth in special functions, growth in ideas, growth here and there. The difficulty remains: How shall we define, and more closely and clearly, the sort of growth taking place? Is it purely a biological change? No. Does the growth in ideas follow the same laws apparent in physical growth? Of this one cannot be certain.

One of the practical misfortunes of these various conceptions of the nature of education is that they influence the training of teachers. He who undertakes to prepare a prospective teacher engages in a highly selective work. Various studies and diverse exercises are mapped out in the interests of the conception which is entertained from the beginning. The teacher is

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4. It may not be uninteresting to place the fuller articulation of these conceptions side by side: Education means the development of all the powers of a being to cause it to act in all directions: education is conscious training and continuous training in the interest of organized action in the individual; education is the preparation of the individual for reciprocal union with society; it is harmonious development; it is the interaction of wills; education is the acquisition of knowledge; it is the way of a man's knowing himself and the world; it is the means for the production of happiness; it is culture; education is organic development,—to list those most commonly in use.

made to fit into the conception of education at large, rather than the reverse. It would be highly instructive to roam over educational history and pick out illustrations in which each of the foregoing conceptions has determined the sort of training which was provided for the teachers coming under its influence. Two examples will suffice in this connection. The culture theory of education runs into humanism and objective study. To know geometry, to know Latin, to know this or that subject, is thus considered the proper equipment for the real teacher. Scholar and teacher here become identical terms. On the other hand, where the process conceptions of education have prevailed, there we find an ardent normalism. Mere methods become the first and last fruits of this idea. The teacher becomes the ideal schemer.

The outcome of the discussion so far leads one to see that the teacher is a dominant factor in the work of education. This work is not automatic in its execution. This should be instructive to the ready definers of educational activity, and lead them to observe that in every valid definition there should be implicit, if not explicit, reference to the nature of education as limited by the possible achievements of the teacher. In other words, if education is to be regarded as a scientific pursuit, the first necessity to be heeded and the first condition to be fulfilled is that we should deal with real facts, real events, and real possibilities. Idealization is alluring in no form of human interest more than in that of education. It is not implied that there are not ideal interests and obligations to be thought of in connection with the great art of human training and human formation. But, for the present, it cannot be insisted upon too urgently that the teacher and he who thinks about the teacher's efforts must address their attention to specific forms of empirical reality.

This leads to the next step in our consideration, where we are obliged to notice some descriptive facts of teaching. Here is where, if anywhere at all, must be found those facts of possible experience which comprise the data of a pedagogical science. Our first observation is to the negative effect that one phrase is not sufficient to describe teaching as a real thing. To teach is not to enact a simple occurrence; to teach is not to convey one



idea ; to teach is not the production of a simple movement ; to teach is not an elementary adjustment. On the contrary, the present epoch of scientific analysis is enabling us to see the complications which are carried into the schoolroom and developed there to a high degree. We must recognize that the character of a science and that the attitudes of those who pursue it are determinable in terms of the material constituting the experience of which it seeks description and offers explanation. Now, to be frank, what is the so-called material in educational experience? For the time being, there should be no hesitancy in maintaining that the primary facts of educational science are, and must be, found in acts of teaching, and these are the most empirical of all pedagogical data. A boy draws a blackboard picture of a hen, or a girl memorizes and recites a selection of poetry, or a third child succeeds or fails in getting certain geometrical concepts. In these apparently isolated cases lurk the generalities which are sought in ascertaining the scientific basis of the maxims to be offered for the next thing to be done in any given case.

There is another negative determination which should be made at this point before proceeding farther. For full three quarters of a century would-be teachers have been urged, in dogmatic fashion, to acquire those characteristics in their relation to the concrete material in educational work which are best described in terms of "being affectionate." The pedagogical attitude has been allied with the maternal instinct, and the loving mother has often been regarded as the ideal teacher, solely because of her impulses toward her child. This sort of a description of educating may have been apropos in an age when the best of culture was harshness itself, and when the teacher posed as a tyrant. In the present period, when men are trying to think out the fundamental relations involved in the task of educating, and to adjust the details of its procedure in the light of those relations, one is surprised to see a confessed return on the part of most astute thinkers to this earlier description. Nothing can be more harmful to the progress of education as a scientific pursuit than such maternal gushing as is exhibited by certain psychologists who are engaged in advocating downright

sentimentalism in their attitude toward the problem of the teacher. "To love" a child is not "to educate" him. As an object in our teaching experience he stands out differently when loved than when educated. Educating is not a condition of loving; the loving of a certain sort may be a helpful, but not a casual, condition in any form of education. To teach is rather to think and to do than to love. On the other hand, this does not imply that all scientific pursuit should be as frigid as the contact of an oyster. Forbidding repulsion does not promote the chase in which the would-be scientist takes part.

Primarily and positively, teaching is an activity; and all training of teachers should be planned and conducted with the intention of preparing them for specific action. It is neither a sentiment nor a theory. Indeed, the teacher may have very fine feelings and erroneous theories without the real activity being essentially modified, as one might well suppose. According to this point of view, the problem of a supposed science of education really is this: Does that activity essentially depend upon, or in any way characteristically involve, the intellectual processes and selective reactions of the teacher? Our traditional view would have it that the fit teacher is constructed by instinctive endowments. But we must also see from the very start that teaching of any sort is not primary and simple, but is derivative and complex. If this general problem is answered affirmatively, then we must work out, with the widest caution and the closest analytical scrutiny, the intimate connections that may obtain between an idea and the activity of which the idea is the theoretical representative. If it can be made clear that an activity is dependent for its character upon its derivation, however obscure, from an idea, then the corollary is plain. In order to teach, get ideas rather than imitate activities.

This positive description of teaching is too general. There lies wrapped up in it the vast network of relations which appear in every act of teaching. This current mode of describing what teaching is silently classifies it with walking, speaking, making boxes, etc. In this silence one must find the radical weakness of the prevalent attitude against the teacher's own desire to know more about education, an attitude which fosters an unwholesome

mediævalism in pedagogy. The activity in which teaching is said to consist is not the same as the movement of a finger or the frolicking of a kitten. Closer inspection shows one that teaching can take place only when certain organic compounds have appeared in experience. Pedagogical efforts immediately differentiate themselves from those mechanical movements and biological adjustments just mentioned. Though it has dependence upon certain mechanical and biological processes, yet it exhibits itself as something not primarily premised in their constitution. Teaching is much rather a transaction than a simple outward-going activity on the part of the one who teaches.

(Analysis thus brings us face to face with the other party to the transaction, viz., him who is to react while being taught.

There is another instructive aspect in the description of teaching which may be mentioned without tracing the intermediary steps leading to it. A teacher's reality is a futurity. A teacher is aiming at certain products of growth which are to appear at some time, or at successive times, in the more or less remote future of the pupil. It is not his own future, it is not his own experience, which is the real thing to the teacher, so far as the teaching is concerned. (Parenthetically, the state should see to it that the teacher's own future should not become an essential question in his own mind. Pensions are a logical panacea.) The activity of the teacher, however, is always a present activity. He is operating now. But upon what grounds does he proceed? it is asked. What evidence can he offer that the present processes shall perpetuate themselves in the future life now being formed? The time relations involved in all teaching thus become fundamental, and pedagogics must acquire a species of astronomic prediction. The teacher is dealing with the present passing experience of the pupil. Thus it is, finally, the experience which the child lives through which is of most importance to the teacher. It must not be overlooked that the teacher, as such, is only one among the many factors operative in the formation of the child's individuality. This concession, however, must be toned down immediately by the assertion that the teacher is the one conscious factor who must be informed as to the presence and

value of all the organizing factors. Herein lies the difference between the teacher and the parent, between the teacher and the citizen; and, in our present system of schools, one might even say, between the teacher and the principal or the superintendent. From these considerations we may derive a second problem, which in contrast to the one stated above would read thus: How is it possible to develop an activity which shall comprise within itself the proper adjustment of all these factors? Is such an achievement abstractly possible?

By way of suggesting an answer to this problem, and of throwing some additional light upon the foregoing analysis, we might pause here for the following observations: A growing interpretation of the scientific attitude is to regard the scientist as serving the particular intellectual obligation of tracing out all the interconnections among the facts to which his attention must logically be limited. These interconnections soon become familiar in terms of the principles underlying the methods of inquiry, and the laws representing the highest and broadest generalizations which the inquirer justifies on the basis of facts. We have already seen, in various directions, the complications in which every act of teaching is essentially involved; and, so far as ideas and reasonings have any qualifying effect upon subsequent action, just so far forth has the teacher a defensible claim upon the possession of a knowledge of those complications. The teacher's claims, however, arise only when he proposes the end of modifying his pedagogical efforts in the interest of the definite, natural sequences which appear in the changes characterizing the reality for whose benefit he labors.

A few negative criticisms may accentuate some phases of current tendencies. Education has been for some time, and now is, largely in a gossipy, telltale mood. Instead of proving pedagogical propositions in a straightforward, scientific fashion, we are telling what others did, and what we have seen and heard. We spend our time in taking the record of cases here and there, in this and in that school. Gossip and widespread intelligence, however, are not science in any sense of the term. The growth of educational journalism—almost magnificent as it is—is not the real progress for which we are now justified in asking.

Some have a large and fertile idea that, whereas science is chiefly experimental in its methods, so can the work and possibilities of teaching be made scientific forthwith. The attempts made in this school and in that school are really experiments, as it is everywhere said; and then the good people cannot withhold the conclusion that the statements and summaries finally presented by the superintendent or the principal are, in fine, contributions to the science of education! Can anything be more false and specious than this? Can anything be more pitiable in the culture of persons living in a really scientific age?

The genius of the pedagogical fraternity seems strongly against an improvement of the scientific situation which education now occupies. The greatest difficulty appears to be found in the fact that the method of educational thought has been, and continues to be, "empirical" rather than "scientific" in any real and approvable sense of the word. Everyone, for example, is familiar with claims and descriptions such as these: "We were bad in our education, but we are improving." "We formerly taught English only, but now we teach Spanish and German." "We made failures, but, compared with the past, we are now successful with our educational difficulties." In all such attitudes the experience of the critical and approving individual serves as the prime basis of comparison or as the standard. Every teacher bred in such an atmosphere is constrained to feel that his own thought is as fully justified as that of his neighbor or as that of his superintendent. One should keep his mind open, however, to conviction on the question whether science will be able to modify this attitude.

There is another practical phase to-day which is extremely interesting in this connection. There are those among us who would have education become truly scientific merely as a result necessarily following from the fact of having teachers study particular sciences. To all intents and purposes, the study of hydrostatics or of chorology would be regenerative on the part of the teacher. It is supposed that science is a universal spirit that breathes over all. But dry bones can never be made

to grow dead flesh! If education is ever to become a science, in the sense of working out a particular and acceptable method of supporting its inductions, it cannot be brought about by wearing a borrowed mantle, but rather by the elaboration of what is inherent in the activity of the teacher, generically regarded, and of the pupil as the other member of every teaching equation. Let us therefore abandon the hope of making ourselves scientific merely by forcing ourselves to study the sciences as sciences.

It is high time that we look upon education somewhat more favorably. In the first place, it must be recognized by ourselves, and we must lead others to see, that a quantitative analysis is not the fundamental trait of the scientific attitude. This, of course, has been the historic claim of the scientists. The details of the known objects or events, it is said, must be counted and measured. Amounts of things are supposed to give us accurate knowledge, and changes are supposed to succeed one another volumetrically.

Now, it is just as true that a qualitative analysis is necessary in every form of knowledge, and, in fact, must precede every attempt to measure. The distinction of "what kind" must be made before an arbitrary or a natural standard of quantitative estimation can be established. There is a disposition in many of the sciences at present to sneer at a merely qualitative treatment of their facts. Let us insist, however, that there is "exact" knowledge essentially given in the detection of the marks or attributes of any object in which the scientist has an interest. The work of education is to be understood, then, not in terms of months and grades, nor in numbers of studies and examination percentages. The mathematical refinement, which has usurped almost entirely the modern schoolroom, is a most vicious trait of the current pedagogical attitude. No doubt it is quite proper that the educational machinery should be reported, and it can be reported only in terms of number. This necessity has overflowed its channels, and has transformed itself into the spirit of our pedagogical thought, ramifying the whole structure from the United States Bureau to the smallest school.

When it is said that a qualitative analysis of the work of education must be undertaken, one must not jump immediately into the realm of ideals or the determination of ultimate values. This is done too often, and results in giving us an education based on abstractions. Long before the teacher can present ideals, and long before the pupil mind can entertain notions of value, the progress of teaching is dependent upon kinds of material, kinds of methods, and kinds of attitudes, to which the teacher must resort in order to accomplish the ends of teaching. We are all apt to recognize this now and then in a sporadic way. But the numbering and percentage spirit has so engrossed our interests that the recognition of qualitative values has but little force in our reflections.

A second point must be emphasized. Education scientifically treated must have immediate reference to the processes through which all educating material must go in order to be educative at all. Pedagogy must be dynamic rather than static. Certain things are set in motion when teaching is taking place. This movement may, perchance, become so complicated through the influence of the material of education modifying these processes that it baffles every attempt at analysis. "Scientific" educating is thus seen to consist in that form of teaching which proceeds with a certain defensible consciousness of what is going to happen because of what is being taught and the manner in which it is being taught. Dogmatic teaching, on the contrary, is such as proceeds with the demands that this or that shall be taught in this or that manner simply because the material has already found lodgment in the experience of him who controls the work of the teacher.

Qualitatively regarded, education is a process, more or less systematic, of interference with a growing organism. To the teacher there is committed, ideally and legally, the greatest authority for this interference. Scientifically, it is necessary for us to make clear the right the teacher has to interfere at all. What is sometimes called the artificial and secondary character of education is really identical with this interference. If there can be a rational purpose guiding and present in the interference, then we may well fancy that the basis of a science

of education is in sight and almost within the grasp of the inquirer.

Interference, however, implies preliminary structure and action. To be proper, the interference must be determined, not in an *a priori* fashion, but in light of the actual empirical facts to which it must be adjusted. To speak facetiously, this conception of education as interference is in full accord with the wit contained in the old-time notion of the pedagogue. But there is also the serious side to it, and, as we believe, a valid side. This interference must always be particular. We must not demand, nor expect, a rule which shall enable us to adapt the specific interference to any given individual. On the other hand, there are universal grounds for the particular interference, and it is in the establishment of these grounds that we are to look for the reputable character of education.

Every educational effort must quickly make reference to the fact that human nature is primarily chaotic in character and impulsive in expression. Education in its resultant forms produces organized results. This is central in all the conceptions which may be held of education. Infancy presents and consists of a series of impulses. Each impulse is useful for itself alone. The mechanical reflexes and the instinctive expressions are not co-ordinated in their functional ends. In other words, none of these early impulses has any immediate utility for the other impulses. The educator must establish the relation between the natural history of these impulses and their possible history under any given scheme of interference. He must, furthermore, in order to get at the practical aspects, enumerate the qualitative variations of these impulses according to the conditions of particular time, nation, climate, family, and child. In short, the teacher should be a "loving" naturalist of children; but he should be no less a man, or a woman, of rational ideals, knowing what he wants to realize in the life of the child, and just why these ideals, rather than others, have worth or value.

This brings us to a recognition of certain logical, objective aspects of the work of the teacher. The foregoing analysis is truthful only in so far as all teaching is empty formalism. In



the child there are other demands than those which can be satisfied by the expression of his impulses. The interposition of the teacher is the one way of supplying these demands. The content of education must be derived from human experience in some of its typical forms, and this it is which possesses a logical character. The educational scholar is not merely the anthropologist or the logician. He must know the qualitative aspects of human experience and their interrelations, objectively regarded, before he can rationally interfere with the expression of the child's impulses. There are also certain facts about education as such, in so far as it represents a continuous side of human activity and a certain object of our intellectual interests, which he should know. The two sets of problems thus appearing represent a vast field of objective experience and subjective processes, into which it is impossible for us to proceed any farther.

In conclusion, we may notice one or two features of the pedagogical world, and their relations to the possible scientific attitudes that may be developed. In American education there is a hopeful aspect which offers much promise. The freedom of school development and the thinking which lies behind it in this country are very great. We have, it is true, passed through the catechetical stage, the "three R" stage, the object-lesson stage; and we are now in the nature-study stage, quite as eager as ever to ask for what is new. At the same time, our American teachers are most submissive. Suggestion, rather than conviction, is the source of their impulses. There also obtains a certain weak limitation to our pedagogical traditions. Most of these traditions have been imported, and thus are not readily and permanently assimilated by the teacher developing under our civic and national institutions.

Another feature is less encouraging. The inexperienced teacher is quite unable to see the connection between the careful study of educational factors and processes and the detailed work of the schoolroom. On the other hand, the scientifically untrained teacher is confused when assured that what is being done in the schoolroom can, is, and must be, reduced to the terms of description and explanation. Too often "the prac-

tical" is steadfastly and dogmatically entertained as the criterion of educational truth. Thinking and doing, however, do not stand so related in this world of physical events and human experience. The so-called "practical" may thus be regarded as standing most stoutly in the way of progress in pedagogical science rather than the scientists themselves. And, indeed, it is notorious that teachers usually approach their vocation as young men invariably approach marriage,—from an unscientific point of view! The rational conclusions from general experience are ruthlessly set aside.

### *In the Fall*

The eddies of the north wind sweep  
Through dead leaves rustling low;  
Its breath is from the freshened deep  
And woods with frost aglow.  
Thin, blue, the waving tree-shades lie  
Across the gray road winding by,  
And high on rocky steeps, and higher,  
Glow the red sumach's fire.

Each loosened leaf writes on the air  
A poem in its fall;  
It beckons me its dream to share  
And binds me in its thrall.  
Through the still sunset, amber clear,  
I hear some far-off chanticleer  
From out the farmyard call.

The azure fire that fills the sky  
Is cold, but full of love.  
Rocked on its breast the cedars lie  
Crowning the cliffs above.  
And, running down yon chain of hills,  
Color with praise the autumn fills,  
Knowing 'tis joy to die.

HELEN CARY CHADWICK.

## *The Imagination as a "Practical" Faculty*

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MAGINATION is often understood as meaning the act of calling up in the mind objects, incidents, chains of events totally different from anything the imaginer has ever heard of or seen. Not many months ago a student surprised me by saying, in perfect good faith, that "Tennyson was less remarkable for his intellectual powers than for his imagination." Further questioning revealed the fact that the student regarded the imagination as the exercise of an entirely trivial force, totally unrelated to any of the higher qualities of intellect. Since that time, observation and investigation have convinced me that this student is not alone in his opinion that the imagination is a vagrant, gypsy-like, and wholly superfluous faculty.

Far from being such a fantastic painter of non-existent unessentials, it is the power to re-combine, in such a way as to produce new forms, incidents, or stories, certain things, persons or happenings, already learned through the sense-perceptions and preserved by the warder memory. It is a sort of intellectual and spiritual chemistry whereby old material is transmuted into new,—a kind of embroidery in which the shreds and patches of every-day life are wrought into patterns whose colors no dyer can outvie, whose golden threads shine with the glory of the gold of Ophir.

The imagination, we are sometimes told, is a dangerous faculty; it leads to dreaminess, to idleness, to longings after the unattainable, to neglect of the every-day duties. True, like all other faculties, it is dangerous if left untrained; memory is also dangerous when it responds to the stimulus of evil; and reason is especially dangerous when not taught care in the choice of its materials.

Seriously, what can be accomplished without aid from the imagination? The most practical of men, priding himself upon

his practicality, and scorning dreams and dreamers, must use this faculty in forming the simplest and most ordinary business plan. The "bulls" and "bears" of commerce, the wreckers of railways, afford perhaps some of the best examples of perversion of imaginative power.

All intellectual development is dependent upon trained imagination. Much of the difficulty experienced by students in mastering, not literature only, but history, geography, chemistry, physics, arithmetic, astronomy, even geometry, is due to a dead or dormant imagination.

We are forced to admit that the higher forms of literature make their appeal to this faculty; and it has become commonplace to say that he who reads Milton with pleasure and profit must have an imagination similar in kind, even though less in degree, to that of the great poet. In the teaching of history we are hampered by our failure to realize that students are all too often memorizing meaningless dates, terms, and names from a book, and in no wise exercising "that noble faculty whereby a man is enabled to live in the past and the future, the distant and the unreal" (a historian's definition, by the way). Still less do we note the draught made upon the imagination by true scientific study. What prosaic mind can have any genuine appreciation of the atomic theory, the nebular hypothesis, the vast numbers, and far-stretching spaces marshalled by the calculations of the astronomer? The careful teacher of geometry finds it very difficult to communicate to his pupils the thought of a point as mere position, of a line as direction only. He is a geometer, indeed, who can follow a demonstration wherein lines and angles do not take shape in his mind as diagrams on the blackboard. Educators make their great plea for geometry as a discipline for the reasoning powers, but it has also its value as training for the imagination; and without imagination there is no geometry.

Man is born not for work only, but also for play. The relaxation of the mind is as important a factor in its growth as the tension thereof. Statistics tell us that one of the principal causes of insanity is monotony of life. The vast majority of mankind must earn their bread by some kind of hard work;

and any work pursued mechanically becomes in time monotonous, irksome, descending to the level of mere drudgery. What shall the great army of workers do to preserve their cheerfulness, and thereby their sanity? Hours of labor are long, and money not too abundant; amusements, commonly so-called, belong to the rich and leisured classes; so the alternative remaining for the worker is to idealize his work, to think of it not as a mere isolated means of gaining a livelihood, but as a part of the beauty and the music of creation. So hath the toiler content and lasting joy. On the other hand, would not a touch of idealism help to free the man of leisure from the haunting weariness that comes of empty mind and heart and idle hands?

A great part of the friction of the world, from the quarrels of school children to the differences between capital and labor and the strife of nations, is due to the fact that each party to the dispute is utterly unable to see anything but his own side of the question. When we shall have learned to put ourselves in others' places, much of the contention and bitterness of the world will disappear. We shall grow to have a broader charity, a kindlier tolerance for other people's views on all subjects. "To understand all is to pardon all," says the kindly French proverb. We shall realize, sometime, that truth is infinite, that each of our finite minds can seize upon only a small part of any kind of truth; and we shall be thankful to our neighbors for sharing with us what they may have drawn from the common source of supply, instead of, as now, resenting any such effort as an undervaluing of the little grains of corn that we individual grasshoppers have succeeded in appropriating. Instead of resenting the offer of a bystander's lens, or even his piece of more or less smoky glass, we shall accept it thankfully, and make the most of our opportunity of seeing a little bit of truth in a new light. It is the development of this power, not merely

"To see ourselves as others see us,"

a revelation which is often more discouraging than profitable, but to see things in general as others see them, without losing our hold upon the truth that we also have found, that will break

down the barriers of caste, race, and creed, and make real the poet's vision of

"The Parliament of man, the Federation of the world."

Along with this growth in tolerance—even love—for other classes and peoples, will come also that quality, rarer and more difficult of attainment still, patience with the idiosyncrasies of our daily associates, a trait whose development will sweeten and freshen all the currents of life.

It is a fact worthy of note that the rise of democracy is contemporaneous with the development of the novel as a literary art-form. Shakespeare's true-hearted gentlemen are, without exception, men of rank, and even the great dramatist seems not to have realized that Pisanio is a true knight, though clad in a servant's livery; but the novelists have shown us that nobility of character and greatness of heart have little to do with class or station; they have portrayed for us noblemen, sages and philosophers in all ranks of life; they have taught us that ordinary men and women, living quiet, unnoticed lives, may be just as interesting as princes, nobles and maids of honor. It is in thus bringing the imagination home to ordinary life, touching the common things with a fairy wand and causing them to reveal their inner splendor, that true realism in fiction finds its mission.

The growth of man's religious nature also calls for the trained imagination. "Faith is the substance of things hoped for, the evidence of things not seen."

"Each age must worship its own thought of God,  
More or less earthy, clarifying still  
With subsidence continuous of the dregs."

The crude efforts of successive generations of men to figure to themselves the nature of the Infinite, whom they with much pains construct out of the fragments and glimpses of the best that they have known or conceived of in human nature, would be absurd if they were not pathetic, but are worthy of all reverence in so far as they are sincere. Considering the law of supply and demand, we must conclude that the higher intelligences possess a deep and kindly sense of humor; the children of men

are so naively egotistical, so ridiculous, so discouraging, and withal so lovable.

In our strivings toward that character which Emerson has told us is destiny, for the upbuilding of that kingdom which a greater than Emerson has said is within us, we need the aid of all broadening, sweetening and deepening influences to be found in nature, art and letters. All things that throw fresh light upon the mysteries of life, that dignify its experiences, lighten its toils, mitigate its griefs, or sweeten its relations, are to be sought and cherished; and important among these agents is imagination, rooted in perception and memory, and guided by reason.

This faculty must not be scantily fed or allowed to atrophy for lack of exercise; it should be nourished with folk-lore and fairy tale, with myth, fable, allegory, romance, poetry, science,—whatever in life or art will enable us from childhood to green old age to realize the beauty of the world, the gladness of life, the sacredness of truth.

We have no right to regard the passing of the years as a cause of sorrow; the ripening of a human life should be as natural and beautiful as the ripening of an apple. We shall gain this attitude of mind and heart, this hopeful outlook upon human history and progress, by meditating much upon the real but invisible forces continually at work about and within us, and so learning to estimate tangible things as means of life, but not life itself. It was a man of remarkably logical as well as imaginative mind who proclaimed, nineteen centuries ago, a principle worthy of frequent repetition and careful consideration, "For the things which are seen are temporal, but the things which are not seen are eternal."

It is not the purpose of this discussion to offer training of the imagination as a panacea for all the ills of the world, only to call attention to it as a much neglected but really valuable means of graces and of grace.

## *Alcott as a Pioneer Educator*

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HE past year has witnessed a revival, not alone of remembrance and criticism upon every possible phase of Emerson's character and influence, but also diverse and emphatic comments upon his associates in the famous "Concord Group." Of the latter, Alcott was the marked gainer, and at the same time a loser, by this association. To Emerson's kindly interest and practical aid the Alcott family were indebted for many comforts which would otherwise have been denied. Alcott's introduction to men and women of the highest culture, both here and in England, was largely due to Emerson's sponsorship. On the other hand, the inconsequent methods of Alcott in business, his vague and nebulous "Orphic Sayings," and his frequent misfortunes were in such contrast to the effectual work of Emerson as lecturer and writer that, to the public mind, Alcott seemed a weak, pampered protégé of the greater man. It was granted that Emerson found pleasure in the sweet nature and the lofty ideas of his neighbor, but to the present day the witticism is often recalled, "Emerson was the seer and Alcott the seer-sucker." Thoreau was for a time the victim of such misrepresentation in his relations with Emerson, but his published volumes and his strong individuality have at last overcome the false impression and given to him his due recognition for a genius, distinctive and inspiring. Alcott has not yet received the full appreciation which belongs to his memory. In the collective criticism given to the Transcendentalists, among whom he has ranked as a high priest, in the humorous comments upon his futile schemes and his unintelligible sentences, Alcott, the educator, the pioneer promoter of modern reforms in aim and methods, has been underestimated.

The long life, from November, 1799, to March, 1888, encountered more vicissitudes than prosperity, more defeats than progress in the worldly view, yet his earnest efforts for educational reform bore fruit even in his lifetime and have become,



often unconsciously, the models of many a pedagogue in the later days of child-study. His epithet, accredited to Emerson, "The tedious Archangel," should have less permanence, in the public mind to-day than the more just encomium of "The American Pestalozzi." Alcott's tastes as a scholar were derived from his good birth rather than from any early opportunities for culture. To his mother he attributed his own sunny temper and unfailling faith, as well as his love for books and



AMOS BRONSON ALCOTT.

refining influences. Denied the college education which he craved, the four years spent in Virginia and contiguous provinces, peddling small wares and canvassing for children's books among the gentry of the Southern estates, left indelible marks upon his aspirations, and gave to him those graces of manner which won the admiration of foreign as well as American friends. Returning to his Connecticut home in 1825, after

illness had interfered with financial gain and sturdy habits, he decided to seek a position as school-master near his home. The erratic schooling of early years had been supplemented by reading of the best English authors and by observant, studious hours during the first three years of his travels. His uncle, Dr. Bronson, was master of the Cheshire Academy and through this influence the young man gained an appointment to the Centre District School of Cheshire and began the work of educational reform which was to wield such influence upon his later life and the tone of the community.

Public school education was in its throes of infancy with no weak opposition among some of the most cultured men of the age. The words of a college professor in 1826 are quoted as indicative of the sentiment in Connecticut and her neighbor states against any progressive ideas for elementary schools: "The money appropriated for common schools ought to be applied to better purposes,—to the support of colleges. Little good can ever be done in common schools." Facing such obstacles of opinion, with a brief experience in schools at Bristol and Wolcott, the teacher began his work with courage and enthusiasm. He has said that he followed the old methods at first, then gradually introduced his new ideas for the mental and moral betterment of his pupils. Of the actual principles of Pestalozzi and his followers he was almost wholly ignorant at this time, yet he applied many of the methods of the Swiss reformer without realizing the resemblance. His first care was to improve the physical environment of the school. In place of the cramped benches and heavy routine he expended some of his own income in providing more comfortable chairs, and allowed space around the stove where the children could practice light gymnastics and "play games" under his direction. He established a school library,—then indeed a novelty,—and permitted the use of the books by the members of the pupils' families. Adopting the Pestalozzian theory that the child's mind may be best developed by exercising his faculties directly and making appeal to his sensations and conceptions, Alcott utilized the modes of questions and analysis which later distinguished his Boston

school. His second principle was the education of the moral sense in matters of school discipline. To the consternation of the visitors and many of the parents, he abolished corporal punishment, then regarded as the acme of successful teaching, and established a jury among the scholars to decide cases of wrongdoing.

This Cheshire school began to attract curiosity far and near. A few sympathizers were found and an occasional note of approbation was sounded. Such appeared in the *Boston Recorder* for May 14, 1827, quoting a Connecticut writer:



ALCOTT'S CONNECTICUT HOME.

“There is one school of a superior or improved kind, viz., Mr. A. B. Alcott's school in Cheshire,—the best common school in this state, perhaps in the United States.” (Memoir I, 75, 76.) Despite such rare praise, however, the teacher met growing opposition among his neighbors, to whom, he says, “the fear of innovation hangs like an incubus upon every measure of improvement.” When he ventured to ask for more money for changes in the schoolroom the Yankee penuriousness, which has not been wholly eradicated in matters of school expenditure,

submerged all pride in the school. Not alone were his demands denied, but a rival school was opened in accord with the established, stilted methods of the past, and after two years of experiment and unselfish effort Alcott found further persistence useless. If his brief service seemed a failure to the average resident, there were a few progressive souls who echoed the prophecy, "The public mind is sufficiently awake to make something grow out of what has been effected."

Alcott's school at Cheshire had won the attention of Rev. Samuel J. May, among other noted thinkers of the time, and from this acquaintance resulted, not alone the later successful ventures in Boston, but also the friendship and marriage with Miss May, whose devotion and efficiency saved the Alcott homestead from many a threatened collapse. With justice the aged husband might poetize of this noble woman,

"If fortune smiled and late-won liberty,  
'Twas thy kind favor all, thy generous legacy."

After an unsuccessful attempt at teaching in Bristol, Conn., where his Cheshire enemies prevented sympathy, Alcott accepted the suggestion of the May family, and in the summer of 1828 went to Boston and established the infant school which chronicled his initial effort there. After two years of moderate success and widening influence, he was married and left Boston to fulfill the wishes of some Philadelphia friends that he should have a school in Germantown. The plan was outlined that Mr. Alcott should teach the children up to the age of nine years and then promote them to a school by his friend and co-laborer, Mr. Russell, whose *Journal of Education* was one of the most effective agencies of educational progress for many years. Although the arrangements were not fully perfected, the Alcotts were very happy in their Philadelphia home, and the educator found a new joy in recording the sensuous and mental phenomena of the first child born in their home. In his school of ten pupils he continued the methods of physical exercises, conversations, and reading from allegorical or fanciful tales. He wrote: "Nothing is presented them without first making it interesting to them, and thus securing their voluntary attention. They are made happy by taking an interest in their own

progress and pursuits." The proposed school in Philadelphia failed to gain firm hold, and in the autumn of 1834 Alcott had returned to Boston and opened his famous school in Masonic Temple. For a time he was the educational hero of the hour, was compared to Milton, and extolled by reformers and faddists alike.

The thirty pupils in 1834 increased for two years and then, by public misinterpretation coupled with a courageous position regarding the attendance of a colored child at the school, the popularity waned, until the school closed in 1839. These five years, however, with Mr. Alcott's fearless, persistent course of teaching, left impress upon the educational world that cannot be obscured. In a survey of the advance during the last two decades in aim and method, in considering the stress now placed upon the imaginative and moral faculties of the child, one may read potent echoes of the ideas which dominated the Alcott school. Two books have remained as authoritative expression of the principles and modes of teaching,—*The Record of a School*, edited by Miss Elizabeth Peabody, and *Conversations on the Gospels*, conducted by Mr. Alcott with his youthful pupils. The former volume gained great favor with the public and has been reprinted three times, if no more. The latter became the snare which entrapped the philosopher-teacher and caused the first attack from press and pulpit.

Readers of *Little Men* and their experiences in Plumfield school are often unfamiliar with the origin of this strange experience. In the preface to the third edition of Miss Peabody's *Record*, published in 1874, Miss Alcott, then a famous author, wrote in explanation and tribute: "The methods of education so successfully tried in the Temple long ago are so kindly welcomed now—even the very imperfect hints in the story—that I cannot consent to receive the thanks and commendations due to another. Not only is it a duty and a pleasure, but there is a certain fitness in making the childish fiction of the daughter play the grateful part of herald to the wise and beautiful truths of the father,—truths which, for thirty years, have been silently, helpfully living in the hearts and memories of the pupils, who never have forgotten the influences of that time

favorite mode of questions,—“What was the purpose of coming to school?” “To learn what?” until he had evolved the answer that they came “to learn to feel rightly, to think rightly, and to act rightly.” This conversation was illustrated with anecdotes and suppositions fitted to their intelligence, and Miss Peabody has recorded the success of the experiment: “Simple as all this seems, it would hardly be believed what an evident exercise it was to the children to be led of themselves to form and express these conceptions and few steps of reasoning. Every face was eager and interested. From right actions the conversation naturally led into the means of bringing them out. And the necessity of feeling in earnest, of thinking clearly, and of school discipline was talked over.” The unique mode of punishment in the school, the vicarious infliction of this upon the teacher by the offending pupil, was the subject for many a jest during the days of persecution which followed. While such a method could scarcely be recommended for large schools of general character, the subtle influence of the principle involved seemed most potent in the Alcott school. Miss Peabody devoted much space to the recital of this phase of the school life, emphasizing the keen shame and conscience, as well as the passing embarrassment, developed among the pupils by this appeal to their feelings and higher qualities: “Boys who had never been affected before, and to whom bodily punishment was a very small affair, as far as its pain was concerned, were completely sobered. There was a more complete silence, attention, and obedience than there had ever been. And the only exceptions, which were experiments, were rigidly noticed. Mr. Alcott, in two instances, took boys into the ante-room to do it. They were very unwilling, and at first they did it lightly. He then asked them if they thought that they deserved no more punishment than that. And so they were obliged to give it hard; but it was not without tears, which they never had shed when punished themselves. ‘This is the most complete punishment that a master ever invented,’ was the observation of one of the boys at home; ‘Mr. Alcott has secured obedience now; there is not a boy in school but what

would a great deal rather be punished himself than punish him.' A new sense of the worth and importance of that for which he was willing to suffer pain seemed to spring up all around, while the unquestionable generosity of it was not only understood but felt to be contagious."

Ever emphasizing his lessons by means of "the pictured forms of things," reading daily from the best imaginative and moral tales,—*Pilgrim's Progress*, *Fairy Queen*, *Krumacher's Parables*, and kindred books,—spending much time upon the analysis of words and concepts, the teacher inculcated within the pupils' minds the real meaning of such words and qualities as love, faith, conscience, affection, aspiration, insight and will. Individual journals were required, and the few surviving scholars of this and later experiments after Mr. Alcott's model cherish these journals as the most precious and illuminating of life records. The curriculum of this school included Latin, geography, arithmetic, geometry and composition, in addition to the special emphasis upon reading and writing from the best English classics. Illustrations from nature formed no small part of the day's program, another example of the progressive trend of the school. To cultivate individual imagination, and by natural means foster intellect, to establish moral traits in each pupil, to maintain a common conscience and a common courtesy in the school, were among the fundamental aims in the teacher's plan. The result has been frankly told and reiterated by Miss Peabody, after many years of retrospect and widening scope of educational ideas: "General intelligence, order, self-control, and good will have been produced to a degree that is marvelous to see; especially when we consider that his scholars' ages range from three years to twelve, and none are older, and most of them only eight or nine years old."

In these later days of vital pedagogy it has become a favorite method to submit to children questions regarding their innate ideas of God and abstract principles of good and evil, thus developing their mentality by natural means, and at the same time affording their questioners many facts and conclusions of great value in psychology and child-study. When Mr. Alcott attempted to educate the moral and religious faculties by such

methods, seventy-five years ago, when he published the result of his inquiries as *Conversations on the Gospels*, he met a storm of abuse which seems hardly credible to this generation. Not alone from conservative religionists, but also from men and women of progressive thought for that day, came protests against disturbing puerile minds with questions about birth, life and immortality. Wide reading was given to Miss Martineau's volumes on *Society in America*, but this woman of keen perception and high standards shared and expressed forcibly the criticism on Alcott's methods, bringing down upon herself the indignant rebuke of Margaret Fuller. Without mention of names, the references were easily recognized as she thus commented upon a famous school in Boston: "The master presupposes his little pupils possessed of all truth in philosophy and morals, and that his business is to bring it out into expression; to help the outward life to conform to the inner light; and especially to learn of these enlightened babes with all humility. Large exposures might be made of the mischief this gentleman is doing to his pupils by relaxing their bodies, pampering their imaginations, over-stimulating the consciences of some and hardening those of others; and by his extraordinary management offering them every inducement to falsehood and hypocrisy. His system can be beneficial to none and must be ruinous to many."

With yet greater misrepresentation and severity than the above paragraphs show, Mr. Alcott was attacked in Boston and New York papers. To his defense in private letters and public print came Emerson, Channing and other leaders of thought, emphasizing the high motives and large soul of the man, while the *Boston Quarterly Review* for October, 1838, deploring his abuse, ended with undisguised praise for his work as educator: "For there is no man in our country who so well understands the art of education, and who is so capable or desirous of doing more for establishing a system of human culture, in consonance with our faith as Christians and as republicans." In reading these reported *Conversations* to-day, one is often impressed with the somewhat pedantic tone of the questioner and the stereotyped form of the answers from these children versed in the



Westminster Catechism and Watts' hymns, yet there are glimpses of many a new thought and spontaneous inquiry as well as answer. Alcott's aim was first to educate through the instincts and imagination, then proceed to the more complex and acquired mental processes. His dictum seems wholly pertinent to the accepted truth in current education: "The instincts are to be followed as the supreme law of the soul. These must be kept pure and high." To illustrate this idea he found the life of Jesus the highest example.

In *The Christian Examiner* for November, 1837, appeared an exhaustive survey of this phase of Alcott's work with liberal extracts from his printed *Conversations*. Any verbal exercise of such nature loses much by reproduction in print, and the force of expression in face and voice is needful for a full comprehension of the success attained by these methods in awakening the faculties of the pupils. The *Conversation on Evil and Good*, as quoted in this article, is a good example of the mingled cant and originality found in the answers of the children. As usual, Josiah was the most astute and, at the same time, natural in his ideas and their phrasing. On prayer he said: "We must ask God for help and at the same time try to do the thing we are to be helped about. If a boy should be good all day, and have no temptation, it would not be very much; there would be no improvement; but if he had been tempted, he could pray and feel the prayer, and try to overcome it, and would overcome it; and then there would be a real prayer and a real improvement. Temptation is always necessary to a real prayer, I think. I don't believe there is ever any real prayer before there is a temptation; because we may think and feel and say our prayer; but there cannot be any doing unless there is something to be done."

While these methods of question and analysis may have developed occasional abnormal ideas, they were conducted, in the main, with such caution and kindness that they avoided any undue mental strain. It was one of Mr. Alcott's fundamental principles that knowledge or instinct must be educed slowly and affectionately, and that education in its primal stages can thus be achieved far better than by compulsory

instruction. He said: "A child is injured only by his mind's being forcibly bent in a direction in which it does not move naturally; by being forced to attend to what does not interest it." Such words convey a mere axiom of present-day education, but they were regarded as iconoclastic, if not heretical, in 1837, when the tread-mill process and the birch constituted the popular mode of teaching.

The tide of opposition became too strong for further resistance. Instances of Alcott's inconsequent business habits, examples of his impracticability, could always be adduced, and furnished ground for the sneer which is more destructive than the open criticism. With characteristic courage he persisted in retaining the negro girl among his scholars, thus throwing down the gauntlet as proof of his later abolitionist zeal, and this cost him many pupils from the aristocratic families. After two years of waning favor and financial deficit, he abandoned the school. We are not here concerned with the subsequent experiments and discouragements of the next few years—the *Conversations* in Boston and Concord; the communistic sojourn in "Fruitlands," at Harvard, Mass., well portrayed from its humorous aspect by Miss Alcott in *Transcendental Wild Oats*; the attempt at farm life in Concord; the wanderings of the family, often amid real poverty, until the wife's matchless efficiency and the daughter's keen literary faculty had brought hope out of failure and established the family in comfort. The last years of Alcott's life were brightened by many a proof of his recognition. Probably he never had a prouder moment, in a sordid sense, than when he returned from one of his later lecture tours in the West and turned over one thousand dollars into the family exchequer. Attracted by reverence for his noble character and ideals, or curious to experience contact with his unique personality, visitors came from many localities to that famous Concord Summer School of Philosophy which he established in 1879, and which has seen revival in this Emersonian year as a bit of actual reminiscence. The change of sentiment toward him may be evidenced in the two poetic references by Lowell,—the earlier satiric lines in his *Fable for Critics*, and

the less familiar but more just tribute in the second portion of *Studies for Two Heads*:—

“ Yet smile not, worldling, for in deeds  
Not all of life that's brave and wise is ;  
He strews an ampler future's seeds,  
'Tis your fault if no harvest rises ;  
Smooth back the sneer ; for is it naught  
That all he is and has is Beauty's ?  
By soul the soul's gains must be wrought,  
The Actual claims our coarser thought,  
The Ideal hath its higher duties.”

There were two episodes in his later life that concern his influence as an educator. Well do they testify to the reaction from his persecution in 1838. The first was the visit to England and his honors there among English educators and social reformers. In Emerson's *Dial* for October, 1842, is a detailed account of this visit, especially the conference at the school named for him, Alcott House, Ham, Surrey, under the management of Mr. H. G. Wright. This gentleman, with his associate reformers, Charles Lane, James Pierpont Greaves and Heraud, names familiar to the readers of the letters of Thoreau and Alcott, were earnest advocates of social as well as educational advance, and they rejoiced in Alcott's idealism. Like Greaves, he was a promulgator of Pestalozzian methods, placing stress on the imagination, heart and soul rather than on the memory and textual modes, while inculcating thoughts of God, reverence and love by questions to educe the innate image.

During the later years of Alcott's active life he was closely identified with the schools of Concord, while his suggestions and advice were courted increasingly by educators throughout the country. The prophecies of early adherents were showing signs of fulfillment. The published report of the school committee of Concord for 1860 gives one an opportunity to meet, on familiar terms, this benignant man, acting as superintendent of the district schools of his home region and finding joy and inspiration in his service. With typical kindness he records the successes of each teacher, and excuses any failures on “exhibition days” on the ground of shyness before visitors. A

few brief excerpts from his report will best portray the noble nature and the progressive ideas of this pioneer American educator: "My visits have been rare opportunities for becoming acquainted with the children in the several districts. The privilege has been esteemed a pleasure, and I have wished I had more than the half day's time to give to each school." Speaking of the value of stories and parables as means of gaining the most complete attention, he passes on to commend singing and song-plays: "'Let us sing' has the welcome sound of 'Let us play,' and is, perhaps, the child's prettiest translation of 'Let us pray,' admitting him soonest to the intimacy he seeks." There is special pertinence in the report from the East Primary School: "Mrs. Emerson has interested herself in this school. The children have received New Year's gifts annually at her house across the street, and the flower-beds were laid out and set by her hands. These outdoor pleasures are a part of early culture, and the cheapest part of it; they are so insinuating and available, so consonant to Nature's ways, and so wholesome." With yet more emphasis we note the sequential words upon the kindergarten: "The German Kinder Garten, or child's garden system, recently introduced into England, is attracting attention with us. It is the happiest play-teaching ever thought of and the child's Paradise Regained for those who have lost theirs. It must prevail with the spread of love and the kingdom come in sanctified souls."



## *The Higher Education of Boys*

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EDUCATION is a series of processes that cause physical as well as psychical changes in the human being. It consists both of training and instruction. These changes are caused slowly and gradually and require years. I propose to speak of the higher education of boys. Three quarters of the students in our high schools are girls; and we are fast coming to be a nation whose women are very much better educated than the men, a condition that to my thinking is by no means to be desired.

### THE START IN LIFE.

Birth is to a large extent fate. A boy's parentage is the most important fact in his career. Heredity spells destiny. Blood tells. The first and greatest of all opportunities is to be born of good parents. We see this in every department of life. In a world where most people are unsuccessful, most of the successful individuals have had good fathers and mothers. To be started out in the world with healthy, honest, industrious parents of good reputation is altogether the greatest blessing that can come to a human child. Everybody presumes that the boy whose father is a citizen of good standing in his community will himself become a similarly good citizen. I am not talking now of wealth in lands and goods, and bonds and bank deposits, but of that more important wealth, which is a good name well deserved,—that invaluable wealth of character and reputation.

But for the boy his birth is the one opportunity for which he can in no wise prepare himself. We must and do respect the facts of parentage, as we do those of the weather and of the seasons.

"Men say it is an awful sight  
To see a soul just set adrift  
On that drear voyage from whose night  
The ominous shadows never lift.  
But 'tis awful to behold  
The helpless infant newly born,  
Whose little hands unconscious hold  
The keys of darkness and of dawn."

Yes, birth is far, far more awful than death. By living wisely and carefully in accordance with Nature's laws of health and God's laws of right and wrong we may postpone for many years the day of death, and meanwhile day by day we may prepare for death; but who can prepare for birth? Let us praise or condemn no man for his failure, for his wisdom or for his folly, for his righteousness or for his sins, till we know of what parents he came and what chance his birth gave him.

#### OBEDIENCE TO MOTHERS.

The next great opportunity in life is the mother's care. Here the child's education begins. Here, too, the child has some little choice of his own whether to respond or not, to obey or disobey, to appreciate or to reject the authority of experience. In the orphan asylums of great cities ninety-eight per cent of all the babies die; but of foundlings given to individual caretakers in homes only fifteen per cent die, and of little ones brought up by their mothers only five per cent die in infancy. This means something. Here is the second great fact of Nature—that the mother's care is essential to life itself and almost guarantees it. Whether the mother is wise or ignorant makes some difference, it is true, but whether she is wise or ignorant, good or bad, rich or poor, her love for her child keeps him alive. Of this we may be absolutely sure, that every child ought to obey its mother, and that every mother ought to teach her child prompt and unfailing obedience. The child's life and health depend upon this obedience in a world full of dangers to the unwary eyes and feet of our little ones.

Even the animals fully understand this. Every little bird of the woods, every animal's cub, is taught to obey. It is, unfortunately, true that while the animal mothers teach their children to obey, not for the mother's but for the children's sake, human mothers sometimes wish the children to obey for the mother's sake, not for the children's. I am not advocating here the child's obeying its father. I doubt very much whether fathers generally understand what kind of obedience to teach their children. Fathers generally order children to do this or that to make themselves more comfortable, whereas the children who come here by no choice of their own have the right to be free from all interference not designed solely for their own good. I believe that the mothers ought to manage the children, and that they do it far more wisely than the fathers. I am talking now of children of tender years. But where the mother is sick or feeble the father must take the mother's place, and do it as far as possible in the mother's self-sacrificing way. Certainly he should never interfere in the child's life except at the mother's request or in her absence. The second great opportunity in life is to learn obedience from a kind, firm, watchful, loving mother. The child who has learned to obey such a mother has learned the first and most important lesson in life.

The next opportunity is much more formal and far less common than that of learning to obey a good mother. Thank God, nearly all mothers are good mothers! If they were not, the race would soon perish. This third opportunity is that of going to school. Now, this is my real subject. But until I made it plain that I regard parentage and home education as vastly more important factors in making a success of life than any kind or amount of schooling can be, I was unwilling to discuss the artificial opportunities of civilization and preparation in school to seize these opportunities.

#### WHAT IS OPPORTUNITY?

Perhaps the first thing to ask is, What is an opportunity? It is a common saying that we let opportunities slip and that we do not know an opportunity when we see it. An oppor-

tunity is a chance ; it is luck ; it is accident. An opportunity always suggests good fortune. Opportunity is a conjunction of circumstances by which one may improve his condition of life or his equipment for life. Let me give instances that I may be the better understood.

I knew a man once who had been an office clerk in a manufacturing establishment. There was a change in the management and he was offered the position of manager of sales at double his former salary. He began the work and failed to do it well. He is once more an office clerk ; and it is safe to say that office clerk he will continue for many years. But the man who became manager of sales after him is to-day president of the corporation. That was opportunity.

I knew a boy who, after graduation from a high school, was offered an opportunity to go to college with over half his expenses paid. He did not dare to try to earn the less than half of the expenses that remained to be provided. To-day that man is glad to earn ten dollars a week, while many and many another man of equal ability as a boy is to-day a college graduate in charge of important affairs. Of course, now and then even a college graduate fails, but an examination of the facts shows conclusively that a college education increases one's chances of success ten times.

I know a man who once owned a farm where now stands the very business center of a great city. The post office occupies the site of his farmhouse. An immense office building occupies the site of his barn. But the man who was a farmer there at twenty-five years of age is now at seventy-five years of age in that great city entirely without property and dependent upon relatives. That was opportunity.

Not a day goes by that one and all of us do not fail to grasp the opportunity for want of sight to see it and of strength to hold it. My wish is to call attention vigorously to education as the method of giving boys the wisdom to see opportunities and the ability to seize and hold them.



## DIFFERENCES IN CAREERS.

The world of affairs in church and government, business, school profession, is no dead level of equal personalities. There are affairs high and affairs low, affairs big and affairs little, affairs complicated and affairs simple, affairs important and affairs unimportant. Even in a democratic republic, where we are equal in the eyes of the law and government, there are great careers to be lived, and there are small careers. All that are good are necessary to progress and honorable. The money rewards do not measure their true relative importance with each other; nor does the fame attached to some of them, nor the power that they give. The career of the scholar is with the high affairs of knowledge and truth; the career of the manufacturer is with the large affairs of wealth; the career of the statesman is with the complicated affairs of government; the career of the physician with the important affairs of life and death. But there are other affairs than these. The scholar is surrounded by library and laboratory clerks and supplied with books by printers and with apparatus by craftsmen. The manufacturer needs mechanics, laborers, and helpers. The statesman can do nothing nowadays without reporters and politicians to help him. The physician needs the chemist and the nurse.

Now what has the education of the school to do with these affairs, great and small? This—that without education even the best born and the best home-trained boy can scarcely hope when he is a full-grown man to be doing the high and complicated tasks of life. I take it for granted that every parent wishes for his boy the success of doing well hard and difficult work, and plenty of it. Nowadays there are many rungs of the ladder of success, and the grades of the schools are the lowest of these rungs. Heredity and home care are the sides of that ladder.

## THE SCHOOL SYSTEM.

In our country to-day formal and systematic education consists of twenty or twenty-two grades, or years. Of these the first two grades are in the kindergarten. The next four are

commonly called the primary school. The next four above these are in the grammar school. The boy or girl who has successfully advanced up these grades has done about ten years of work. The next four or five are in the high school or academy. Above these grades are the three or four years of the college, the normal school, or the scientific school. The young man or woman who has been graduated from these schools has done about eighteen years of work. Above these schools of general culture are the various best professional schools of law, medicine, theology, education, offering three or four years of systematic work. Above these twenty or more grades there are no systematic courses, though the scholar and investigator may pursue researches after truth all the years of his life in the greatest and highest universities. Nor will he ever find any end to truth. Nor will the world ever find any end to its need of truth. If I had time I could multiply instances that would show how all the progress of mankind has been due to the discoveries of truth by the world's often neglected and even despised truth seekers in science, invention, and philosophy.

But what have these grades to do with practical affairs, such as earning wages, farming, running a business, practicing law or medicine or engineering? Nowadays they practically control these affairs. A graduate of a primary school goes to work, let us suppose at thirteen years of age, the average age that boys drop out of school. What does he know at that age? A little about geography: that the earth is round and that the earth goes around the sun once a year, and that maps tell the location of places upon the earth. A little about history: that this part of the earth was discovered about four centuries ago, and that George Washington and Abraham Lincoln were the greatest Americans. A little about arithmetic: how to add and to subtract, multiply and divide whole numbers and fractions. A little about drawing, so that he may present by a few lines the plan for making a table or a chair. A little reading, so as to be able to read the news in the paper. Such is the nature of the mental equipment of the average American boy who has completed his five or six years of

school and is, say, thirteen years of age. When he drops out of school what is he prepared to do? He may become a cash boy in a store, or an errand boy in an office, or a helper in a mill. If the unions permit, he may become an apprentice to some trade. If he is able to earn three dollars a week he is doing very well.

Every grade of schooling we can give the boy after that we are improving his power to see and seize better opportunities than are offered by these lower stages of the economic life. It is my opinion, after spending myself twenty years in school as a student, that every year in grammar, high school and college is worth twice the preceding year in informing the intelligence and in training the character of men.

#### VALUE OF THE GRAMMAR SCHOOL EDUCATION.

Suppose now that our boy goes on to finish the grammar school. Not every boy has the ability to do this. Education sifts as well as trains. What does he know at the end of nine or ten years of formal education? In amount it is hard to compare the attainments of primary and of grammar graduates. The latter knows a good deal about American history, about geography, about language. He can read not only the news items, but some of the editorials and the long articles of the paper. Usually he can draw quite well. He knows ten, yes, twenty times as many things as the primary graduate. In arithmetic he has studied the tables of weights and measures and the principles of percentage and interest. He can do all kinds of simple computations in addition, subtraction, multiplication, division, in far less time than the primary graduate, and knows the elements of business arithmetic. He has grown quicker, more accurate, keener and broader. When he leaves school he has less difficulty in finding an opening, and not only earns more money, but fills his place better and is more ready to rise in the world. He is fairly well trained for citizenship. He is more likely to keep in good company. He is in a fair way to be fit when full grown to hold positions of trust and responsibility in business and politics. Most important of all, he is well-equipped to learn a trade or to follow

intelligently some definite line of business. Most of the merchants, most of the mechanics, most of the bankers, most of the successful farmers, have had a grammar school education, but no more. Looked at merely from the money point of view, the boy who leaves school after the fourth grade does well to earn fifty cents a day, while the boy who finishes the grammar school often gets a dollar a day at once. The first sum scarcely pays board; the second leaves a margin for clothes, books, church and recreation. Some boys, however, are sufficiently fortunate to be able to go on and through the high school. One boy in fifteen in America does this. Now this high school boy has been at school eight years longer than the primary graduate. Is this lost time? Before he is twenty-five years of age the high school graduate's wages will be twice those of the young man who had the earlier but poorer start in business. And if we had technical high schools the difference would be even greater. One young man in two hundred goes on to and through the college. One in a thousand goes through the professional school.

#### EXCESSIVE COMPETITION FOR WORK.

It may fairly be said that completion of the grammar school course is essential to what we call "success in life." It is true that in years past, and even in the present generation of men, individuals have succeeded who have not had even a grammar school education. But every decade that passes sees fewer and fewer men successful who have not the mental training and equipment of the grammar school graduate. There are two reasons for this. The first is that competition for places and for opportunities is constantly growing keener and severer. Indeed, this competition for work and living wages has grown so keen and severe that workmen in the various trades of carpentry, masonry, plumbing, hat making, etc., have felt it absolutely necessary to form unions for the sake partly of protecting their work and wages from excessive competition. This means that there are too many persons of similar preparation for life. This is very hard for the boys and for their parents, for the limitation of the number of apprentices

in the trades organized in unions means lessening the boys' opportunities to learn useful and paying handicrafts. If all the mills and all the stores and all the offices that now employ boys as helpers, messengers and minor clerks should become organized in unions, the primary, and even the grammar school, graduates would not be able to find employment at all.

The second reason why it is steadily growing harder for persons to succeed is that life itself is steadily becoming more complicated and difficult. It requires more ability, character and education to succeed nowadays than it did even a generation ago. In other words, while there never was a time when there were so many opportunities always open as there are now, these opportunities can neither be understood nor taken advantage of by persons who are not well educated. As a school superintendent, upon whom manufacturers and merchants are all the time calling for boys and young men to fill this or that opening, I see this side of the matter very plainly.

#### THE INCREASING DIFFICULTY OF LIFE.

Now there is a practical aspect which I wish to call to your attention vigorously and fully. It is harder every decade for a boy to go through a grammar school. The studies grow harder and more numerous. It is growing harder to get through the high school, and much harder to get into college. And some parents object to this fact. There is a cause for this steadily increasing difficulty, and this cause lies outside of the school. Life itself is steadily growing harder. In every trade the work grows more difficult. In every profession more and more complicated conditions must be met and successfully resolved into their simple factors. We expect more of our fellowmen than our ancestors used to expect. A mason does more work in an hour than masons used to do, and he works on a higher building, with thicker walls and more angles and corners. The fabrics of staple goods to-day are much more complicated and various than they used to be; we expect more colors to be fast and to be beautiful than were worked with commonly a hundred years ago. The making of roads has become a science. When disease kills a man nowa-

days we are apt to say that a better doctor would have saved him. Everybody nowadays expects more of everybody else than our forefathers used to expect. The conclusion is obvious—our boys who are to succeed in life must take a longer time in school to prepare for life than boys used to take.

Run over this list of a dozen occupations—machinist, engineer, mechanic, plumber, carpenter, decorator, railroader, post-office clerk, salesman, farmer, dyer, hatter. Is there any place of importance in any of these occupations for a boy under sixteen years of age? Is there really any place for a boy under eighteen years of age? Remember, too, that we expect every man to be not only a wage-earner worth his wages, but also a good and intelligent citizen. Is the grammar school course too full and too long and too elaborate for any boy who means to be successful in any of these occupations? Does the boy graduate of a grammar school start from too high up the ladder of knowledge to become a good machinist, engineer, carpenter?

Again run over this list of occupations—drug clerk, tradesman, bank clerk, foreman, printer, reporter. Is there any place of any importance in any of these lines for a man who as a boy has not had at least a grammar school education? Would a technical high school education be too much as a foundation for entering any of them?

#### ROOM ENOUGH FOR THE EXCEPTIONALLY WELL EDUCATED.

We desire our boys to succeed. The desire ought to become a purpose. The purpose ought to become an accepted plan. We must recognize that in many lines of effort there are even now too many workers. We must force up every available boy, lest we have a great surplus of laborers on the market who will force the great mass of laborers down. We can get rid of the excessive competition for work only by educating as many as possible for new, higher and more difficult kinds of work. The inventors who created the great departments of electrical engineering and handicraft did two great things for mankind: they created new markets for labor, relieving to that

extent the old over-crowded markets, and they made life itself more comfortable and convenient. Everything that we can do to make some boys different from other boys and more intelligent than average boys helps not only the fortunate boy who is well educated, but also the boy who is less educated, since it removes another rival for inferior work and makes the superior worker, whose work itself necessarily benefits others, including the less fortunate.

Therefore, I welcome the technical school that makes skilled workmen in new lines in which unions are not necessary, because the workmen are so few that the demand is greater than the supply. I welcome the higher scientific school that opens up new fields for industries and prepares for those fields. There is no crowd at the top of any mountain of endeavor. There is no limit to the height to which culture can be developed. There are no bounds to the spread of civilization. The harvest of success and prosperity is always ready for the coming of the man competent to gather it in.

The prayer of every parent and every teacher for our boys should be not for opportunity which calls often to ears that cannot hear, but for adequate preparation for the opportunity. To undertake anything before one has the trained ability to carry it out spells failure; that dread word, once attached to a boy or man, has often blighted his career forever. I close by saying what seems to me not less important than anything else that I have been able to say: one of the very best results of an adequate education for life is the self-understanding which tells us what we ought not to undertake because we are not ready. The boy trained for some opportunity is not likely to undertake work for which he is not fit. The mothers and fathers who can send well-educated boys into the world are not only insuring their success; they are making the world itself better worth living in for everybody else.



DR. HILL



## *Hon. Frank Alpine Hill, Litt.D.*

RAY GREENE HULING



HE life of a teacher is not unlike the falling of a stone into a pool: there is a slight commotion around the spot upon which the stone has fallen, a few waves circle off in constantly failing impulse, and the pool is apparently as before. Only he who knows nature and her laws could discern that force had been communicated. Few who observe the quiet labors of a faithful teacher comprehend how mighty is the power of personal contact between him and his pupils, or have a thought of the mysterious contagions of intellect and spirit by which nature's noblemen impart their strength and greatness to others. But when death interrupts the labor of love, and by its shock quickens memory and appreciation, then all see clearly and with fullness of vision what inspiration of power has been lost. So this autumn has revealed to us more distinctly than ever before the value of the personality and of the life work of the subject of this sketch.

Dr. Hill was born October 12, 1841, in Biddeford, Me., the son of Joseph S. and Nancy (Hill) Hill, and a lineal descendant of Peter Hill, who came from Plymouth, England, in 1633, and settled in what is now Maine. He graduated from the Biddeford High School at the age of fifteen, entered Bowdoin College at sixteen, and graduated at twenty. In school and college alike his interests were broader than mere academic pursuits, for we find him playing first base on the college nine, active in the debating club, editor of the Bowdoin Bugle, curator of the Natural History Society, and Class Prophet on Class Day. His studies, however, had not suffered, for he received election to the Phi Beta Kappa, and delivered an oration on Class Day. In paying his way through college he had utilized the long vacations in teaching. After graduation (1862) he became principal of the Limington Academy for one term and then was chosen principal of the Biddeford High School, in

which six years before he had been a pupil. In 1864 and 1865 he studied law. In the latter year, by invitation of the City Government of Biddeford, he pronounced the eulogy on Abraham Lincoln in the local memorial service held after the assassination. In the same year he took charge of the High School at Milford, Mass., and in 1870 became principal of the Chelsea High School. In 1886 he was chosen Head Master of the new English High School at Cambridge, which grew from 350 pupils to 700 during his seven years of control. The school building, erected in 1891, was in its internal arrangements largely of his planning, and is a memorial to his good judgment. For some years he was closely associated in the development of the Rindge Manual Training School, founded by private munificence for the benefit of the boys of the English High School. In 1893 he was elected the first Head Master of the Mechanic Arts High School of Boston. In the following May, 1894, he entered upon the position which he held at the time of his death, that of Secretary of the Massachusetts Board of Education.

Dr. Hill has always taken an active part in general educational effort, both literary and executive. He has served as President of the Worcester County Teachers' Association, of the Massachusetts Teachers' Association, and of the Massachusetts Classical and High School Teachers' Association. As a writer for the press, as a speaker before educational organizations, and as a public lecturer, his work has been received with marked favor. He has done also some work on school text-books, particularly in editing the revised Holmes Series of Readers, and in adapting for use in schools the Civil Government and the United States History written by the late John Fiske.

Secretary Hill was *ex officio* one of the two commissioners of the Massachusetts School Fund (the Treasurer of the State being the other), a trustee of the Boston Museum of Fine Arts, and a trustee of the State Agricultural College. He was a member of the Corporation of the Massachusetts Institute of Technology both *ex officio* and by election. In 1893 he was appointed a member of the Schools Examination Board of Harvard University. Bowdoin College at its centennial anniver-

sary in 1894 conferred upon him the degree of Litt.D. For two years Dr. Hill was President of the Massachusetts Schoolmasters' Club, the largest and most flourishing social organization of teachers in New England, and for one year President of the Cambridge Club, a long established association of one hundred of the leading citizens of Cambridge for the promotion of civic health and beauty as well as of social enjoyment.

The traits especially characteristic of Dr. Hill were his versatility in adapting himself to the various demands made upon him, his conscientious attention to details, his constant recognition of the best there was in pupils and people, his inclination toward constructive rather than destructive criticism and work, his evenness and courtesy of spirit under all conditions, his progressiveness in educational thought, side by side with a profound sympathy with teachers and a full recognition of the limitations under which they work. As a teacher he was uniformly successful and inspiring, always commanding the respect, love and loyalty of his pupils as well as of his associate teachers. Former pupils tenderly recall how clearly he detected the possibilities in them which they themselves failed to see, and by the power of encouragement actually developed in them fine and enduring qualities of heart and mind.

As an executive officer he gave vigor and prosperity to every enterprise entrusted to him. His nine reports as Secretary of the Board of Education have been marked by breadth and intensiveness and will long be referred to with interest as among the most important educational documents of the decade. They exhibit especially his capacity for patient investigation and for sagacious inference. The period of Dr. Hill's service as Secretary of the State Board has been one of marked advance in educational legislation in this Commonwealth. More than a score of measures have become law, some of them far-reaching in scope and in beneficial effect. Perhaps the most important of these are the extension of expert supervision over all public schools by means of state aid to towns, the bringing of high school privileges within the reach of all pupils in the state, the requirement of a high school diploma for admission to the state normal schools, and the inauguration of a plan for state certifi-

cation of teachers. To other educational movements he had given earnest and laborious thought without attaining for them complete fruition. Two such occupied his attention particularly during the months of his waning strength. The one was the promotion of the interests of the adult blind in the Commonwealth, upon which he made an exhaustive report to the Legislature in an earlier year, and in respect to which he was actively helpful, under somewhat adverse conditions, in the last few weeks of active effort, a service which is gratefully remembered by many friends of the measure. The other measure of special interest was not local: it was the work of the Committee of Eleven of the National Educational Association, which was appointed to formulate on a sound educational basis contemporary educational doctrines, submit statements covering contemporary educational experience, and indicate the tendencies of contemporary educational methods. The service which this committee was designed to render appealed strongly to him and he hoped much from its deliberations. He gave up the chairmanship of the committee only under the compulsion of failing health. How far this failure of health, leading to what seems an untimely death, was due to overwork under the cares and oppositions of public service, physicians only are competent to decide; what is certain is that for forty years Dr. Hill gave himself unreservedly to the advancement of public education, sparing not himself and using to the full his splendid opportunities, and that the spirit of his scholarly, true and vigorous life has entered into countless other lives, bringing to them noble enrichment and glad inspiration. The ripples from the fall of the stone will ever roll outward over the surface of the pool.

*Editorial*

**A**N event of more than local significance was the installation of Dr. John Huston Finley as President of the College of the City of New York, on September 29th, and the laying of the corner stone of the new building by Mayor Low and others, just north of One Hundred Thirty-eighth Street. There were present eminent men in government and letters, and addresses by several of them. A letter was read from President Roosevelt. Wholesome words of confidence and criticism were spoken by the chairman of the board, representatives of the faculty and the alumni, Senator Depew, ex-President Cleveland, Trustee Edward M. Shepard, Governor Odell, Mayor Low, Presidents Hadley of Yale, Butler of Columbia, Schurman of Cornell, and Remsen of Johns Hopkins, and others. Half a hundred higher institutions of learning in widely distant sections of the country were represented in the gathering.

**T**HE addresses were replete with wise pedagogical reflections, and the expressions of confidence in the wholesome cultural, economic and industrial effects of a generous education. Dr. Finley said, as he accepted the seal, "I believe in the higher education for the people; I believe in the higher education supported by the people; and I believe in the higher education that has in its purpose the good of the people." Among other things, Senator Depew said: "The question which most concerns a nation like ours . . . is the maintenance of peaceful relations between capital and labor. . . . Arbitration, which is the happiest method yet devised, requires educated intelligence. The more highly cultivated the understanding, and the broader the grasp of the leaders, the better will they understand each other, and the quicker come together." Grover Cleveland, referring to the College of the City of New York, affirmed that "it will only completely fulfill its mission when its graduates so influence our public life, and so strengthen our public conscience, as to prove beyond a doubt the near relationship between the patriotism of higher education and the public safety . . . with all else that it may impart [it] should constantly teach the democracy of American education."

**T**HE occasion was a notable one as emphasizing from various points of observation the value and reasonableness of a higher education, tax supported, under public control, and looking to civic no less than academic and personal results. That the metropolis of

the country should be so committed to a generous support of and municipal and public confidence in intellectual and moral training of collegiate grade, may well be accepted by cities elsewhere as a guarantee of the soundness of the judgment that "the property of the people should be pledged for the education of the people"; that the education of each is a matter of universal concern; that, in the words of one of the speakers upon the occasion noted (ex-President Cleveland), "education is a selfish, useless thing if it is to be hid in a napkin, or if it is to be hugged to the breast by its possessor as a mere individual prize." Whatever the so-called educated man knows or doesn't know, it would seem to be a useless possession if his schooling has not made him a better husband and father, a better neighbor, a better citizen, and a more trustworthy patriot. All schooling has its social meanings. This conviction is in the minds of thoughtful people everywhere, and the gathering at the half-century-old New York College gave it a fine setting.

**M**ORE generally than heretofore, it would seem, there is being recognized the close connection and interdependence that exists between the institutions for elementary and those for higher instructions. The two departments are not yet emancipated from their jealousies. The colleges sometimes yet depreciate the quality and the importance of the work done in the lower classes, and these too often recognize only pedantry and perfunctory service in the college. Both may be right upon occasion and in particular instances; but each has little reason to sneer at the other. In no small degree, what the college can do depends upon the character of the earlier training. The elementary teachers need to know more of the means and conditions and purposes of the upper schools, and to have read their literature, to have looked at the problems of culture from their point of view, to have been imbued with the free spirit of the student, and to have become interested in the larger questions that appeal to the scholar. On the other hand, nothing more contributes to the sanity of advanced instruction than a close acquaintance with the nature of the maturing process, the making of youth, the saving influences and civic meanings of a wide-spread, common school training, and the habits and motives and yearnings of the great democratic populace as the breeding ground of scholars and leaders. Each has much to learn from the other for the enrichment of his own service. The world of learning is growing in the direction of a better understanding, and the outlook is encouraging.

WE regret to note a widespread tendency to venture into the allurements and excitements of stock speculation. Even teachers and clergymen are speciously besought to place their scanty savings in the hands of promoters who hold out golden opportunities to "get rich quick." Into the shambles ventures many a "lamb," only to realize when too late that to fleece the unsuspecting is the regular business of a large class of apparently honest and respectable brokers. The whole thing is wrong, false, from start to finish. The attempt to get something for nothing is ultimately demoralizing. Nothing breaks down character faster than watching the "ticker" and dealing in margins. We are profoundly in sympathy with the movement for larger salaries for teachers, and will always do all we can to promote reform along this line; but hard as the present lot of many a poor, struggling, underpaid teacher may be we counsel all such to beware of the misleading and reprehensible suggestions of large and quick gains through speculation. This paragraph is rendered timely by the presence of several columns of display advertisements of this kind of financial "opportunity" in the pages of one of our esteemed educational contemporaries. We think the editor must have been napping or running for office when such advertisements were admitted.



*Foreign Notes*

## ENGLAND.

## PASSIVE RESISTANCE TO THE LAW OF 1902.

English papers, educational and political, continue to give lively accounts of the "passive resistance" to the education law of 1902. All over the kingdom conscientious Nonconformists are refusing to pay the portion of the school tax which will presumably be applied to sectarian instruction in church schools, and are suffering the penalty of having their goods seized and sold at public auction amid the applause of their sympathizing friends and neighbors. The London Journal of Education, which in common with other journals in favor of the law, has all along attempted to ignore or to minimize the signs of discontent is forced at last "sorrowfully to confess that the prospect of a compromise or an amnesty seems further off than ever." To the American mind it is evident that this amnesty will never arrive till the whole question is settled on a basis of the absolute equality of all citizens in respect to the public school provision for their children.

## FAVORABLE ASPECTS OF THE LAW.

Aside from the sectarian difficulty which the law has raised, there are many evidences, especially in the larger cities, that the local authorities are undertaking their new duties in an earnest and judicious spirit. As a rule members of the former school boards are appointed on the education committees, and their experience thus utilized under the new system.

It is evident that public opinion in the larger cities is sufficiently active and intelligent to maintain the schools at the standard which they have attained. The most important problem before the local authorities is that of the supply and co-ordination of the higher institutions which the law has brought within their province. The municipal councils have already acquired some experience in this direction through the authority conferred upon them by the technical instruction laws of 1890 and 1891, and the members of the former school boards will bring to their aid the expert knowledge derived from the conduct of "higher grade elementary schools" which have been developed in all the chief cities.

## EDUCATIONAL STATUS OF SHEFFIELD.

The city of Sheffield has set an admirable example in respect to this important phase of educational work by securing Mr. Sadler, late



"Director of the Division of Special Inquiries" in the Education Department, to make a preliminary investigation of the field, and submit recommendations for the guidance of the committee. The report of this investigation together with the last official report of the School Board enables one to form a very clear idea of the educational facilities of this city, and of the combination of public and private agencies which is characteristic of the English system.

Sheffield is a city of 410,000 inhabitants, ranking in that respect a little below Boston or Baltimore, which are respectively the fifth and sixth cities of our own country as regards population. The elementary school accommodation in Sheffield at the close of 1902 was adequate for 74,326 pupils (53,012 in board schools, 22,847 in parochial and other private schools), or for 18.5 per cent of the population. The enrollment in board schools was 51,027; in Church of England schools, 18,593; in Wesleyan schools, 2,520; in Roman Catholic schools, 3,448; and in other elementary schools recognized as efficient, 207, or a total enrollment (evidently including some duplicates) of 75,795. The average attendance was 63,809, which is reported to be eighty-five per cent of the average enrollment.

The total number of board or public schools was fifty-one, comprising 139 departments as follows: twenty-eight for boys only, twenty-eight for girls only, 109 mixed as to sex, thirty-seven for infants (children under seven years of age), and three for defective children. The schools are graded in seven standards, each supposed to represent a year's work. Of the boys 25.03 per cent, and of the girls 24.6 per cent were in the three upper grades in 1902. The board maintained also what is called a Central Higher School, which is a school having a four years' course into which pupils may be admitted after passing the first four grades of the elementary schools. This Central School has accommodation for 938 pupils (boys and girls). Many pupils pass from this school to the secondary institutions of the city to be presently considered. The evening schools under the management of the board were attended for the year under review by 2,774 students.

The force of teachers for the board day schools numbered 889, of whom 139 were head teachers, and 750 assistant teachers. Of the former, 130 and of the latter 521 had received professional training and secured the government diploma. The period of compulsory school attendance, as fixed by the Sheffield Board, covered the ages from five to fourteen, save for certain causes specified. But children between twelve and fourteen years of age who have passed examination in the seventh grade are exempt by law from obligatory attendance. The

board has maintained a very efficient truant service for the enforcement of these requirements. The current expenditure by the board for the year 1902 was \$819,295.

It will be seen from this brief summary that Sheffield is well provided with elementary schools, which, as Mr. Sadler notes in his report, "enjoy a high repute."

At the upper end of the educational ladder stands University College, formed by the consolidation of Firth College, founded and endowed by Mr. Mark Firth in 1879, the Municipal Technical School, organized in 1889, and the Sheffield Medical School, founded in 1828. The aim of University College is to provide for the people of Sheffield and the surrounding district "the means of higher literary and scientific education by university methods of teaching." Its doors are open to all students, without distinction of sex or class, who are over seventeen years of age. In order to increase its usefulness to working men and women, evening classes are maintained, and laboratories and other appliances for teaching the applications of science to the technical operations carried on in the district.

The ordinary day fees range from \$8 to \$13.25 for the session of thirty-two weeks, for classes meeting two hours and a half a week; the fees for evening lectures are about one third the above. These rates are not, however, invariable. The laboratory fees range from \$25 to \$30 a year. These low rates bring the college facilities within easy reach of the artisan classes. There are, moreover, scholarships, which exempt the fortunate holders from all charges.

Between the college and the elementary schools is a gap yet to be filled. Free high or secondary schools in this great manufacturing center there are none. There is a Royal Grammar School, which has sent some brilliant pupils to Oxford and Cambridge and Wesley College, of enviable reputation. The Girls' Public Day School Company also maintains in this city an admirable high school. But in all these schools fees are charged, and the only chance for a boy or girl to enter them is by securing some one of the scholarships, for which there is intense competition. Moreover, it is asserted by Mr. Sadler that "neither school is at present in a position to provide the kind of higher secondary education which a great city like Sheffield needs, and ought to have." "A parent," he says, "living in Sheffield, who wishes to give his son the best kind of higher secondary education, cannot find it in the city. This seems to me a great danger to Sheffield. Much of the future welfare of the city depends on there being in its municipal life, in its industrial activities, and in its com-

mercial undertakings, that trained and alert intellectual power, disciplined by study and broadened by liberal culture, which first-rate secondary day schools do much to provide." It would pay the city well, he continues, to bring its provision of secondary schools up to date, but "at present the equipment of higher secondary education for boys in Sheffield is as much behind the standard which has been reached in the progressive cities of Germany, and in some of the most enlightened communities in the United States, as the old council chamber in Surrey Street is behind that in the new town hall."

Other weaknesses in the educational equipment of the city are dwelt upon in the report before us, but with the single exception of the lack of provision for the adequate training of teachers, they are trifling beside that of the meager supply of secondary schools.

In the present state of English public opinion with respect to popular education, it would be useless to advocate a system of free secondary education such as commands support throughout our own country, and Mr. Sadler wisely refrains from idle counsels. He looks to an extension of the scholarship system and its systematic administration as the only available means of bringing a fair proportion of the young people of Sheffield within reach of the means of education above the elementary grade.

It is interesting to observe that Mr. Sadler would have the scholarships awarded upon the results of an examination which should be sifting rather than competitive, and which should keep the secondary schools in close co-ordination with the elementary schools. While deprecating the idea that children who are not able to finish a course of secondary education or not likely to profit by it should be encouraged to the effort, he urges that these larger opportunities "should be effectively open to promising boys and girls from the humblest homes." There is a wide difference between this position and that which obtains in this country, but it is far in advance of the idea generally prevalent in England.

As might be expected, Mr. Sadler's report is not only clear and exhaustive with respect to the educational condition of Sheffield but abounds in sound reflections of universal interest. The keynote of these reflections, as of the discussion of the conditions to be met in Sheffield, is the interrelation of all phases of educational work. Even for students of technology Mr. Sadler advocates a many sided training. This alone, he says will fit them "to deal with new problems," and to appreciate the "ever-growing influence" which applied science is exerting on the "social problems and the intellectual movements of our time."

A. T. S.

## *Book Notices*

NOTE.—The number of books now published monthly is so large that we shall hereafter adopt the plan of promptly acknowledging by title, author, publisher and price, all books sent us for review; and later, as space is available, give more extended notice to such as seem most likely to be of interest and value to our readers.—PUBLISHERS EDUCATION.

**Brief Greek Syntax.** By Louis Bevier, Jr. This is a concise setting forth of the essentials of the Greek grammar, for the student to use in preparing for entrance examinations and for sight reading. Within the compass of one hundred pages are given just the elements and rules that the student in first Greek needs and which the larger grammars oversupply. For the beginner it is an admirable study book. American Book Company.

**Le Petit Robinson de Paris,** by Eugenie Foa, has been edited with notes and vocabulary by Louise de Bonneville, and issued to meet the recommendation of the Committee of Twelve; it has also been adopted by the College Entrance Examination Board of the Middle States. The story is in easy, graceful style, and is admirably adapted for class reading. It is one of the earliest as it is one of the best dog stories in literature. D. Appleton & Co.

**Principles of English Grammar.** By J. N. Patrick. This is the third in Patrick's language series and is designedly prepared for advanced grades, for use in high schools, seminaries, academies and normal schools. The author has reached this conclusion: "The study of grammar as a system cannot be understood and applied by the average eighth grade pupil; technical grammar is too abstract for pupils in the grammar grades." In harmony with this conviction he has made his earlier books in the series largely language studies, reserving for the last book the essentials of technical grammar. His analysis of the subject is succinct and thorough; the structure of the language is studied with due regard to the student's needs but without excessive elaboration. Philadelphia: J. B. Lippincott Company.

**American Heroes and Heroism.** By William A. Mowry and Arthur May Mowry. We cannot have too many of this kind of books for our boys and girls to read and study. The authors have been inspired with the fire of true patriotism and have written their book with unusual enthusiasm. The spirit of it is infectious; the stirring tales of heroic deeds and brave men will stimulate every young reader to a keener appreciation of what stuff makes a hero and how great was the work the founders of our republic put into its upbuilding. Moral heroism is emphasized more than physical courage, high ideals are set up, and nobility of character is recognized and supremely set forth. It is a stimulating and influencing book; its reading and study mean the making of a better and truer citizen of this republic. Silver, Burdett & Co.

**Heroes of Chivalry.** By Louise Maitland. This is literature that is worth while. It is designed for pupils in the grammar grades and concerns itself with King Arthur's adventures and the quest of the Holy Grail, followed by the tale of Roland of Roncesvalles. The style is singularly pure and interesting, and the book is admirably adapted for introducing the student to the literature of chivalry. Silver, Burdett & Co.

**Caesar's Gallic War.** By Harry F. Towle and Paul R. Jenks, of the Boys' High School, Brooklyn. This edition contains seven books of the Gallic War and is a somewhat formidable book of over six hundred pages, the text comprising over two hundred and twenty pages, the notes over two hundred, and the vocabulary over one hundred pages. However forbidding it may appear to the student, it is nevertheless a work of sterling worth and profound study. The authors have delved deep into the subject of the wars and have given the results of their study and experience in the classrooms with painstaking accuracy and commendable clearness. The notes, while exhaustive, are in no manner padded with translations of difficult passages or references to recondite grammatical technicalities. They are helpful, suggestive, and good working notes, and will save much reference to the grammar, which all teachers well know is rarely indulged in by students intent on getting the best form of expression for their translation. The vocabulary is expressly prepared for the work and is a most gratifying aid. The book is embellished with numerous illustrations and maps. We are confident teachers of Latin will be glad to make careful examination of this latest annotated edition of the Gallic Wars. University Publishing Company.

**A Selection from the Best English Essays.** By Sherwin Cody. These selections are intended to be illustrative of the history of English prose style, and are taken from such masters as Bacon, Swift, Addison, Lamb, De Quincey, Carlyle, Emerson, Macaulay, Ruskin, and Matthew Arnold. The selections have been chosen with fine discrimination, bringing to the general reader the best of each of the authors mentioned. Not the least valuable part of the book are the historical and critical introductions that preface each author's essays. Mr. Cody is an honest critic and speaks the words of soberness and truth in his estimate of the essayists and their productions. His general introduction is a masterful piece of writing and well worth the price of the book. A. C. McClurg & Co.

We have received the following books for review in EDUCATION :—

*A Calendar of John Paul Jones.* Manuscripts in the Library of Congress. Washington : Government Printing Office.

*A List of Lincolniana in the Library of Congress.* By George Thomas Ritchie. Washington : Government Printing Office.

*My Own Story.* By John Townsend Trowbridge. Houghton, Mifflin & Co. Price, \$2.50.

*Shorter Poems of Goethe and Schiller.* Selected and annotated by W. H. Van Der Snissen, M.A. D. Appleton & Co.

*Conquering Success, or Life in Earnest.* By William Mathews. Houghton, Mifflin & Co. Price, \$1.50 net.

*Widows: Grave and Otherwise.* Paul Elder & Co.

*Book of Nature.* By Johnny Jones. Paul Elder & Co.

*The Progressive Arithmetic.* By W. F. Nichols. Thompson, Brown & Co. Price, Part I, 35 cents : Part II, 45 cents ; Part III, 55 cents.

*Elements of Arithmetic.* By John W. Hopkins. The Macmillan Company. Price, 55 cents.

*Lessons in Astronomy.* By Charles A. Young, Ph.D., LL.D. Ginn & Co. List price, \$1.25. Mailing price, \$1.45.

*The Odes and Epodes of Horace.* Revised Edition. Edited by Clement Lawrence Smith. Ginn & Co. List price, \$1.50. Mailing price, \$1.60.

*Cicero: The Tusculan Disputations, Book I, and the Somnium Scipionis.* Edited by Frank Ernest Rockwood. Ginn & Co.

*How the People Rule.* Civics for boys and girls. By Charles De Forest Hoxie, Pd.M. Silver, Burdett & Co. Introductory price, 40 cents.

*The World and Its People, Book XII, Porto Rico: The Land of the Rich Port.* By Joseph B. Seabury. Silver, Burdett & Co. Price, 50 cents.

*An Introductory Arithmetic.* By David M. Lensenig, M.S., and Robert F. Anderson, A.M. Silver, Burdett & Co. Introductory price, 40 cents.

*A Reader's History of American Literature.* By Thomas Wentworth Higginson and Henry Walcott Boynton. Houghton, Mifflin & Co.

*The Model Algebra for Elementary Schools.* By Edward Gideon. Philadelphia: Eldredge & Brother.

*Physiology Primer.* By Oliver P. Cornman, Ph.D., and Oscar Gersom, Ph.D. Eldredge & Brother.

*Special Method in History.* By Charles A. McMurry, Ph.D. The Macmillan Company. Price, 75 cents.

*The Geography of Commerce.* By Spencer Trotter, M.D. The Macmillan Company. Price, \$1.10 net.

*Inductive Lessons in Biology.* By Lawanna Wilkins, B.S. Benj. Sanborn & Co.

*Novello Music Course: Graded Sight-Singing Melodies for Blackboard Use.* Primer, First Reader, Second Reader and Third Reader. By Francis E. Howard. Novello, Ewer & Co.

*The Lady of the Lake.* By Walter Scott. With an Introduction and Notes by James Chalmers, Ph.D., LL.D. D. Appleton & Co. Price, 30 cents.

*The Spinner Family.* By Alice Jean Patterson. A. C. McClurg & Co.

*Medial Writing Books, Shorter Course.* A, B and C. By H. W. Shaylor and G. H. Shattuck. Ginn & Co.

*Medial Spelling Blanks for Words and Definitions.* 1, 2 and 3. By H. W. Shaylor and G. H. Shattuck. Ginn & Co.

*The Teacher's Guide to Accompany the Text-Book of Elementary Physical Geography.* By William Morris Davis. Ginn & Co.

*The Five Nations.* By Rudyard Kipling. Doubleday, Page & Co. Price, \$1.40 net.

*The Corona Song Book.* By William C. Hoff. Ginn & Co. Mailing price, \$1.20.

## Periodical Notes

Look for the December number of *Scribner's Magazine*. The prospectus promises an exceptional feast of literature and art.—An interesting account of how Dowie, the prophet, found his vocation is given by I. K. Friedman in the November *Everybody's*.—"Personality" is the note of the November number of *The Booklover's Magazine*. A glance at its interesting table of contents reveals the fact that more than half the articles deal with the lives and work of men of the present and the past.—"Four Roads to Paradise" is the title of a novel by Mrs. Maud Wilder Goodwin which is to appear in *The Century Magazine*, beginning with the November number.—*The Catholic World Magazine* for October has some strong papers on "The Unspeakable Turk," "Training for Self-Support," by Lilian C. Paschal, is an article in *The Delinquent* which will be read with interest by every woman, whether she be in the business field or the home.—In the current number of *The Forum*, "The Educational Outlook" is described by Ossian H. Lang, and Dr. J. M. Rice continues his work in "Educational Research" by giving "The Results of a Test in Language."

## Recent Important Publications

### **Bolles's Money, Banking and Finance . . \$1.25**

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### **Monsanto & Languellier's Practical Course in Spanish . . . . . \$1.25**

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Assistant Professor of Romance Languages in Boston University.

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### **Chamberlain's Field and Laboratory Exercises in Physical Geography . . . . . \$0.50**

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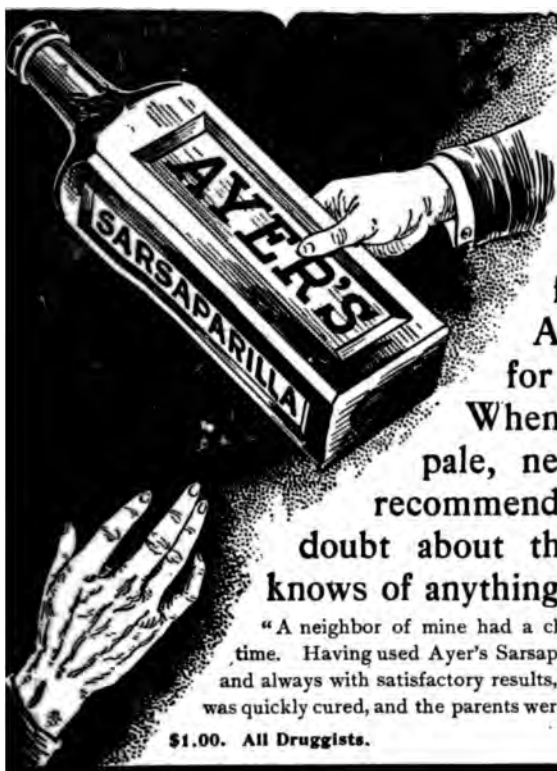
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## CONTENTS

|                                                                                                |     |
|------------------------------------------------------------------------------------------------|-----|
| Problems in High-School Curricula. <i>Prof. John W. Wilkinson</i> . . . . .                    | 193 |
| The Study of Animal Life: Its Place in the Public Schools. <i>Prof. R. J. Hunter</i> . . . . . | 209 |
| Free Text-Books in City Schools . . . . .                                                      | 219 |
| Education at American Expositions. <i>Prof. Frank Webster Smith</i> . . . . .                  | 223 |
| Judge Not. ( <i>Poem.</i> ) <i>Martha Shepard Lippincott</i> . . . . .                         | 231 |
| The Co-ordination of Polytechnic Schools. <i>S. Edward Warren, C.E.</i> . . . .                | 233 |
| Editorial . . . . .                                                                            | 245 |
| Foreign Notes . . . . .                                                                        | 248 |
| Book Notices . . . . .                                                                         | 252 |
| Periodical Notes . . . . .                                                                     | 260 |

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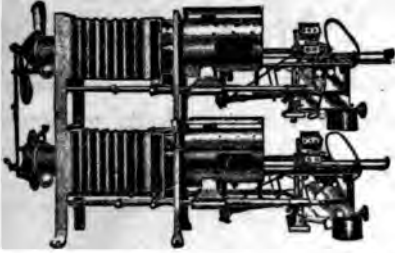
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The thirty-sixth annual meeting of the Arkansas Teachers' Association will meet at Key Institute, Old Concordia Hall, corner of Third and Main, Little Rock, on Tuesday, Wednesday and Thursday, December 29th, 30th and 31st. For information address the President, Superintendent W. A. Crawford, or the Corresponding Secretary, Prof. J. H. Witherspoon, Arkadelphia.

**LITERARY NOTE.** Mr. Edwin O. Grover, who has been for two years Editor of the School Book Department of Messrs. Rand, McNally & Company, Chicago, has recently been made General Editor of the several departments of the house. Mr. Clifton Ham, a graduate of Harvard and formerly Instructor in the Minneapolis Classical School, becomes Associate Editor of the School Book Department.

As the years increase THE YOUTH'S COMPANION endeavors to keep pace with them in a that is wise, beautiful and progressive. Among the important series of articles in 1904 will be one on the occupation of a farmer in many parts of the world—in England, in Ireland, in India, in Argentina, etc. The annual Announcement Number of THE COMPANION, describing the principal features of THE COMPANION'S new volume, will be sent to any address, free. The new subscriber for 1904 will receive all the issues of THE COMPANION for the remaining weeks of 1903 free from the time of subscription; also THE COMPANION Calendar for 1904, lithographed in twelve colors and gold. THE YOUTH'S COMPANION, 144 Berkeley Street, Boston, Mass.

In EDUCATION for January Robert MacDougal, of New York University, will present learned discussion of "University Training and the Doctoral Thesis"; our article in the current number on "Education at American Expositions" will be followed in January by one from Mr. George E. Gay, of the Board of Managers for Massachusetts of the Louisiana Purchase Exposition, entitled "Education at the St. Louis Exposition"; Mr. A. Latham Baker, Ph.D., Brooklyn, N. Y., will attempt to answer the question, "What is Multiplication?" Miss Maud E. Kingsley, East Machais, Me., will present another of her popular "Outline Studies, the particular theme this time being George Eliot's "Silas Marner"; while Mr. H. W. Williams, of the Normal Art School, Boston, will write suggestively of "The Relation of Drawing to the Other Studies in the Curriculum." These articles with editorials, foreign notes, book notices, etc., will make up a good number with which to begin the New Year.

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VOL. XXIV

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No. 4

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## *Problems in High School Curricula*

PROF. JOHN W. WILKINSON, ALVA, OKLA. TER.



THE arrangement of high school curricula and the question of electives in the secondary schools have long been a source of contention between the high school men on the one side, who have the practical working out of these problems, and the university authorities on the other side, who do not as yet seem to fully appreciate the gravity of the situation and thus far have done nothing of consequence toward lightening the difficulties of the ordinary high school in meeting the present exasperating and unreasonable college requirements. A recent writer in speaking of the subject says, "There has been a fearful and wonderful variety of entrance requirements which the colleges have maintained and have sought to impose on the schools, and to all appearances it has been a race between them to see which could invent the most impossible set of requirements, the winner in this contest being esteemed the most advanced and progressive institution."

The position and attitude of many of these higher institutions of learning is much like the man who exacts everything of his followers and offers nothing in return. Their antics in this

one-sided contest remind me strongly of an anecdote I heard a politician relate not long since. He said when he was in Arkansas one winter he heard of a strange-looking dog which was reputed to be the fastest running animal in all that country. As the story goes the dog one day saw a long-eared jack-rabbit, to which he immediately gave a spirited chase. On and on they rushed in their mad course across streams and ditches, and over hills and fields until at last the rabbit bounded under a long barbed-wire fence, and the dog heedless of the danger that confronted him dashed against the wire and in an instant was cleft in twain. A sympathetic farmer in an adjoining field, who witnessed the contest as well as the catastrophe to which it led, hastened to the dog's assistance. Seizing the two halves of the dog as they lay writhing upon the ground, he quickly placed one upon the other and bound them tightly together. The dog was then taken to its kennel and was carefully nursed until its wounds were fully healed. When it had recovered, the farmer was very much astonished upon removing the bandages to find that in putting the two halves of the dog together he had made a mistake, and had put the hind leg of one piece with the fore leg of the other piece, so that he had a dog which could run both ways and could bark at both ends. So it is with some of our colleges in the matter of entrance requirements. In their mad race for supremacy on this point they found themselves suddenly cleft in twain, and having only lately gotten together again in a hap-hazard way, they now find themselves much like the Arkansas man's dog,—running both ways and barking at both ends.

In arranging a suitable high school curriculum the first question that confronts us is, "What is the function of the high school?" Some educators maintain that the high school exists for the express purpose of fitting pupils for college, while others with equal earnestness contend that its purpose is to fit young people for the duties of life. I shall not attempt to answer either contention, but shall assume that the function of the high school is to do both, and this will afford us at least a safe working basis upon which to proceed in arranging a high school course. With this much settled our problem now resolves

itself into the number of courses to be offered, the length of the same, the order of the studies and the time value of each, and the proper correlation of studies, the privileges that shall be allowed in the matter of electives, and many other kindred questions.

As to the first point, statistics show that the greater portion of our high schools maintain only a three years' course, but a large per cent of them have four years' work and two or three courses, so that we may safely assume a four years' course as our proper standard of classification. The number of courses that should be offered is to some extent an arbitrary matter, but in general it should bear a definite ratio to the number of teachers employed in the high school. Two teachers should not attempt more than one course of four years' length, three teachers two courses, four teachers three courses, five teachers four courses, while with six or more teachers a great number of courses may be attempted.

Thus far we have had easy sailing, but now we come to the most difficult part of our task, namely, the selection of the proper subjects for our courses, the order of the same and the time values of each.

To get the best results it is evident that there must be agreement and concert of action between the colleges and the preparatory schools. Each should be considerate of the welfare of the other, and should yield a point whenever the exigencies of the occasion would seem to demand it. The ideal condition will be reached when all of our standard colleges join each other in establishing a uniform system of entrance requirements. This could be brought about by the formation of a National School and College Association, in which an exchange of ideas might be had and a satisfactory agreement reached.

The present condition is anything but a pleasant one. On the one hand we have the University of California raising its proud and lofty head with its death-dealing college entrance requirements and restrictions, and Harvard on the other with its broad and liberal policy in requiring only a certain number of units for admission, unfettered with embarrassments or senseless restrictions. The University of California even goes so far

as to demand that her accredited schools shall be in charge of teachers from her list of accredited colleges, and since this list is extremely small it establishes a virtual monopoly of the high schools of California for the benefit of the graduates of the State University. New Mexico has gone one step farther in a vain effort to distinguish herself and to out-do California by passing a law refusing recognition to the graduates of any university or school except those from the university and normal schools of her own territory. As nearly all of the misfortunes of New Mexico are attributed by its citizens to the adverse report on statehood for New Mexico by the Beveridge Investigating Committee, perhaps we may be safe in charging up this drastic legislation to the same source. By the operation of this outlandish law a Ph.D. graduate from the University of Chicago stands no more show of recognition than a graduate from "a one-horse college." The animus of such a law is narrow, and its effect is virtually to create a monopoly for "the strictly home talent."

Such conditions should be remedied by appropriate national legislation, establishing a system of national certificates for superintendents and high school teachers to be recognized in any school and in any state of the Union. Uniformity in the requirements of high school teachers for certificates is as absolutely necessary as uniformity in the matter of entrance requirements for admission to our colleges, and I am strongly of the opinion that the question is a fit one for the consideration of Congress, and that the time is now ripe for making the United States Commissioner of Education a member of the President's cabinet. Perhaps absolute uniformity in both directions may never be secured, but it is certainly the ideal toward which we should tend.

With a view of ascertaining to what extent uniformity exists I examined a number of courses of study in representative schools from different parts of the United States, and while I found more or less diversity in the arrangement of the courses, at the same time I found that the relative educational values of different subjects in every case were more or less uniform.

The Southern States Association recommends that the subjects be regarded in the order of importance as follows: Language,

first; history, second; mathematics, third; sciences, fourth; and electives, last, if at all. However, if electives are allowed the Association insists that they be chosen from the modern language group. In my investigations I examined the catalogues of nearly one hundred high schools chosen from representative sections on the Pacific Slope, the Gulf States, the Middle West, and the East, and in the majority of the cases I found the groups in the order of importance arranged as follows: English, first; mathematics, second; science, third; modern languages, fourth; ancient languages, fifth; and history, sixth.

As to the question of the ordering of the material in English from grammar, composition, rhetoric, and literature there seems to be little dispute, but the opinion seems to prevail that too much of grammar and rhetoric is taught and not enough of composition and literature.

In mathematics I prefer to have algebra and geometry alternate with each other throughout the course, the algebra class reciting on Monday, Wednesday, and Friday, and the geometry class on Tuesday and Thursday of each week, or *vice versa* as the teacher may prefer at different stages of advancement of the course. In the last year of the course review work in algebra and geometry may alternate with the class in trigonometry to great advantage. This plan I have tried for a number of years, and have found much more satisfactory in final results than the usual way of finishing algebra first and geometry afterwards with a course in trigonometry alone at the close. In such a plan the pupil enters college without a good working knowledge of algebra on account of having forgotten so many of its fundamental principles.

In my opinion not less than five periods per week should be given to the study of mathematics, even if it works a detriment to other subjects. I regard mathematics and English as the foundations upon which all subsequent work must be based. English is the key that unlocks the door to the storehouse of knowledge, while mathematics is the passport to the realm of reason and its inner subtleties.

In the arrangement of the sciences there is a great diversity of opinion, and serious objections have been urged to every

order proposed, as well as to the subjects to be included in the list. The Committee of Ten recommends the following order: 1. Physical Geography; 2. Botany; 3. Zoology; 4. Physics; 5. Chemistry. This order, in my opinion, is open to many objections, and is certainly impracticable. Physical geography is essentially a comprehensive science, drawing upon botany, zoology, physics, chemistry, and geology, and from the very nature of things should come late in the course, and preferably in the last or fourth year. The National Educational Association even goes farther than the Committee of Ten, and recommends that the study of physical geography be completed in the grammar school. I have tried several times to have the subject taught successfully in the first year of the high school, but failed in every instance. I have always had better results with it in the second and third years of the high school course, and the best results of all in the fourth year, when it was studied in connection with meteorology, astronomy, geology, and physiography.

Successful work in biology, or botany and zoology if we take its sub-divisions, presupposes a certain knowledge of chemistry and chemical re-agents, and for this reason chemistry should precede such work. Physics presupposes a thorough working knowledge of algebra and geometry, as well as arithmetic, and for this reason should be placed late in the course, so that the pupil may have the advantage of the previous mathematical training. If the principles just laid down are accepted without question, then the order of sciences in the high school courses should be: 1. Chemistry; 2. Botany; 3. Zoology; 4. Physics; and 5. Physical Geography, in connection with meteorology, geology, astronomy, and physiography.

In the modern language group the order of preference seems to be: 1. German; 2. French; 3. Spanish; 4. Italian; and I have no fault to find with this arrangement. The English being a Germanic tongue, we would naturally expect German to come first in the list. In many of the schools of the West and Southwest its place is frequently supplanted by Spanish, on account of the influence of Spanish-speaking people in those localities. In the old French settlements French for the same



reason supplants the German, on account of the local interests of the people in such places. However, I think the day is not far distant when some attention will also be given to the Russian languages in our schools. With the building of the new railway across Siberia and the rapid settlement of that country, we shall soon be brought in closer contact with Russia than ever before, and the need of instruction in Russian will become somewhat imperative.

Nevertheless, the present method of teaching modern languages seems to be utterly barren of practical results in acquiring the ability to use them; but as no better method yet has received the sanction of the higher institutions of learning, I suppose we shall have to continue to grope in darkness until some modern pedagogical Moses shall rise up to lead us out of this Wilderness of Despair. Perhaps the difficulty lies in the fact that ordinarily their study is postponed too long. In fact, I sincerely believe that the best time to begin the study of these languages is in the grammar school. Where this plan has been tried the results in every case have been highly gratifying. In June of the present year I visited the public schools of Chihuahua, Mexico, and I was somewhat surprised and gratified to learn that English in a simple way was studied in many of the grades side by side with Spanish. I was requested as a favor to speak only in English instead of Spanish, and it was extremely difficult for me to realize that I was in a foreign country, nearly three hundred miles from the nearest English settlement.

There is considerable unanimity of opinion in the arrangement of ancient languages, and but little need be said upon the question. Practically speaking, only two are open for consideration. Latin is placed first in order of importance and Greek second. The usual arrangement for Latin is: 1. First Latin; 2. *Viri Romæ* or Introductory Selections; 3. *Cæsar*; 4. *Cicero*; and 5. *Vergil*.

Less than ten per cent of our schools with classical courses have more than two years of Greek, but I prefer a course with three years of this work arranged as follows: First Greek, *Xenophon's Anabasis*, and lastly, *Homer's Iliad* for the fourth year of the course.

The Report of the Committee of Seven gives a lengthy statement of the importance of the study of history and its place in the curriculum. After an elaborate investigation of the subject the committee found that twenty-two states had uniform courses in history, and four had such courses in preparation, while nineteen were found to be without any systematic courses. This committee recommends a four years' course in history, arranged as follows: 1. Ancient History to 800; 2. Mediæval and Modern History from 800 to present time; 3. English History; 4. American History and Civics.

In case only three years can be given to history, English history should be combined either with American history or with mediæval and modern history. The committee also recommends the introduction in a simple form of stories from ancient and modern history in the intermediate and grammar grades.

The question of the study of psychology is still an open one in the high school, but many educators, of which Professor Dewey is the most distinguished exponent, make an eloquent and sensible plea for its introduction in the high school course. The experiment wherever tried seems to have proved satisfactory.

The subject of electives is still a perplexing one, and we find much said both *pro* and *con* so that one scarcely knows which horn of the dilemma to take. Dr. Nicholas Murray Butler favors limited options or electives in the high school and advocates increasing the number of recitations to twenty-five periods per week. Charles H. Thurber considers them desirable and practicable, but wants them carefully guarded to prevent a scrappy, unsymmetrical course. Münsterberg in his article on electives published in the Chicago School Review writes as follows: "Are elective studies really elected at all, do they really represent the desires and demands of the individual, or do they simply express the cumulation of a hundred influences? Election is more than a chance grasping, and presupposes first of all acquaintance with the object of our choice. Even in colleges two thirds of the elections are hap-hazard and controlled by accidental motives. A helter-skelter chase of the unknown

is no election. If a man who does not know French goes into a French restaurant where the bill of fare is given in French and he points to one line and then another not knowing whether his order was fish, roast beef, or pudding, the waiter will bring him a meal, but we cannot say that he has elected his courses."

Supt. E. G. Cooley, of the Chicago schools, favors limited electives and says: "If a pupil chooses his own studies he will work with a livelier sense of responsibility, and with a more fixed purpose in view. Under the elective system the pupil will be interested in a subject as a subject, and will not take it merely as a study because others take it."

Other authorities could be quoted on either side, but our limited space precludes a further consideration of their ideas at this point. However, it is sufficient to add that electives have been tried in many schools, and in general have proved satisfactory when placed under proper limitations and restrictions.

At Galesburg, Ill., the elective system has been used to a greater extent, perhaps, than in any other place of the United States, and her citizens are quite loud and enthusiastic in their words of praise for the innovation. The city has a population of eighteen thousand, according to the report of the last census, and it is situated in a rich and prosperous agricultural region. Besides the public schools, the city has two good colleges, a business school, and a kindergarten normal.

In 1895 all studies in the high school were made elective, and have remained so to this date. No restrictions or limitations of any kind are imposed upon the pupils in the selection of their studies, and every subject is regarded as being of equal value with any other subject. Previous to 1895 there were two high school courses, and only a few remained in school to complete them. Those who did not finish the course failed either in Latin or algebra, and so left school when there was no hope of finishing. Under the present system conditions have changed vastly for the better and large classes graduate every year.

The method in brief is as follows: The pupil, by the advice of parents and teachers, chooses the studies he is to pursue, and twenty-four subjects are taught in the course which give one hundred and eighty-three credits. A credit is one month's

work recited daily and pursued to completion. Thus algebra studied for a school year nine months gives nine credits, but if carried only eight months no credit is given. The high school course is three years in length, and one hundred credits are required for graduation. Under the elective system the high school in five years grew from an enrollment of two hundred and thirty-four to five hundred, while the city only increased in population from seventeen thousand to eighteen thousand. The number of graduates each year is seldom less than one hundred.

Evansville, Ind., offers limited electives in the third and fourth years of the high school, and requires vocal music for all courses. Postgraduate instruction is offered in French, German, drawing, Greek, psychology, and mathematics. The superintendent states that granting eighth grade diplomas keeps pupils from dropping out in the seventh grade, and causes many of them to enter the high school who would not otherwise do so. A commercial course is offered and thirty per cent of the entire school take it.

In Los Angeles, San Francisco, and Seattle a large number of electives under limitations are offered, and fifteen credits are required for graduation. A credit in this case means the work of any class with five periods per week for a year of eight or nine months.

Leadville, Denver, Kansas City, St. Louis, and Louisville have limited electives, while Minneapolis and many other towns, instead of offering electives, offer a large number of prescribed high school courses.

Throughout the East we find electives offered under limitation in nearly every prominent high school. As an example of the manner in which these electives are offered the following sample course from the High School of Fall River, Mass., may be noted briefly. First year, required studies: English, ancient history, and algebra, and one elective to be chosen from Latin, bookkeeping, physiology, mathematics, and mechanical drawing. Second year, required studies: English, mediæval and modern history, plane geometry, and one elective to be chosen from Latin, German, French, bookkeeping, physiology, mathematics, or mechanical drawing. Third year,

required studies : English, physics, or botany, and two electives to be chosen from Greek, Latin, German, French, American history, mathematics, and mechanical drawing. Fourth year : English, chemistry, or zoology, and two electives to be taken from Greek, Latin, German, French, economics, solid geometry, trigonometry, astronomy, reviews in mathematics, and mechanical drawing. The electives must be approved in each case by the principal of the high school, but the pupil is allowed to select any elective study in which he is prepared to do the work.

The Missouri College Association takes the position that the function of the high school is not to prepare students for college, but to fit them for life, and proposes four courses in the high school of four years each with one elective in each year as shown in Exhibit A :—

EXHIBIT A.

| Year. | 1. English.          | 2. Scientific.    |
|-------|----------------------|-------------------|
|       | English.             | English.          |
|       | Algebra.             | Algebra.          |
| I.    | Zoology.             | Zoology.          |
|       | Roman and Gk. H.     | R. and Gk. H.     |
|       | English.             | English.          |
|       | Algebra.             | Algebra.          |
| II.   | Bot. or Ph.G.        | Bot. or Ph.G.     |
|       | Elective.            | Elective.         |
|       | English.             | English.          |
|       | Geometry.            | Geometry.         |
| III.  | Physics.             | Physics.          |
|       | Elective.            | German or French. |
|       | English.             | English.          |
|       | Chemistry.           | Chemistry.        |
| IV.   | Sol. Geom. and Trig. | German or French. |
|       | Elective or Rv.      | Elective or Rev.  |
|       | 3. Literary.         | 4. Classical.     |
|       | English.             | English.          |
|       | Algebra.             | Algebra.          |
| I.    | Latin.               | Latin.            |
|       | R. and Gk. H.        | R. and Gk. H.     |
|       | English.             | English.          |
|       | Algebra.             | Algebra.          |
| II.   | Bot. or Ph. G.       | Bot. or Ph. G.    |
|       | Elective.            | Elective.         |

EXHIBIT A.—Continued.

| Year. | 3. Literary.   | 4. Classical.  |
|-------|----------------|----------------|
|       | English.       | English.       |
|       | Geometry.      | Geometry.      |
| III.  | Physics.       | Latin.         |
|       | Latin.         | Greek.         |
|       | English.       | English.       |
|       | Chemistry.     | Physics.       |
| IV.   | Latin.         | Latin.         |
|       | Elective or R. | Elective or R. |

In small high schools having only one teacher, the Association recommends that only the first and second years of the English course be attempted. Schools with two teachers should not try to complete more than the first three years of the same course. Not less than three teachers are required for the whole course, while four teachers are necessary to carry two courses. Five or six teachers are needed for all four courses. Not more than seven periods of forty or forty-five minutes each should be assigned any teacher, and the number of pupils in any class should not exceed thirty.

Under Exhibit B will be found the model high school courses proposed by the Committee of Ten. The chief objection I have to urge against its plan is the illogical arrangement of the sciences and the large number of courses with four periods a week, which causes a very uneven distribution of work. The result is that on three or four days of the week the pupil is worked nearly to death and on one or two days of the week he has scarcely anything to do.

In the classical course there is not enough instruction given in Greek and too much in science.

EXHIBIT B.

| Year. | Classical.          | Latin-Scientific.   |
|-------|---------------------|---------------------|
|       | Latin . . . . . 5   | Latin . . . . . 5   |
|       | English . . . . . 4 | English . . . . . 4 |
| I.    | Algebra . . . . . 4 | Algebra . . . . . 4 |
|       | History . . . . . 4 | History . . . . . 4 |
|       | Ph. Geog. . . . . 3 | Ph. Geog. . . . . 3 |
|       | <u>20</u>           | <u>20</u>           |

EXHIBIT B.—*Continued.*

| Year. | Classical.                      | Latin-Scientific.               |
|-------|---------------------------------|---------------------------------|
| II.   | Latin . . . . . 5               | Latin . . . . . 5               |
|       | English . . . . . 2             | English . . . . . 2             |
|       | Mod. Lang. . . . . 4            | Mod. Lang. . . . . 4            |
|       | Geom. . . . . 3                 | Geom. . . . . 3                 |
|       | Physics . . . . . 3             | Physics . . . . . 3             |
|       | History . . . . . 3             | Bot. or Zool. . . . . 3         |
|       | <u>20</u>                       | <u>20</u>                       |
| III.  | Latin . . . . . 4               | Latin . . . . . 4               |
|       | Greek . . . . . 5               | English . . . . . 3             |
|       | English . . . . . 3             | Mod. Lang. . . . . 4            |
|       | Alg. and Geom. . . . . 4        | Alg. and Geom. . . . . 4        |
|       | Mod. Lang. . . . . 4            | History . . . . . 2             |
|       | <u>20</u>                       | Ast. and Meteorol. . . . . 3    |
|       |                                 | <u>20</u>                       |
| IV.   | Latin . . . . . 4               | Latin . . . . . 4               |
|       | Greek . . . . . 5               | English . . . . . 4             |
|       | Mod. Lang. . . . . 3            | Mod. Lang. . . . . 3            |
|       | Chemistry . . . . . 3           | Chemistry . . . . . 3           |
|       | Alg. and Tr. or Hist. . . . . 3 | Alg. and Tr. or Hist. . . . . 3 |
|       | <u>20</u>                       | Geol. and Physiol. . . . . 3    |
|       |                                 | <u>20</u>                       |
|       | Modern Languages.               | English.                        |
| I.    | Mod. Lang. . . . . 5            | Mod. Lang. . . . . 5            |
|       | English . . . . . 4             | English . . . . . 4             |
|       | Algebra . . . . . 4             | Algebra . . . . . 4             |
|       | History . . . . . 4             | History . . . . . 4             |
|       | Ph. Geog. . . . . 3             | Ph. Geog. . . . . 3             |
|       | <u>20</u>                       | <u>20</u>                       |
| II.   | Mod. Lang. . . . . 4            | Mod. Lang. . . . . 4            |
|       | English . . . . . 2             | English . . . . . 4             |
|       | Mod. Lang. . . . . 5            | Geometry . . . . . 3            |
|       | Geometry . . . . . 3            | Physics . . . . . 3             |
|       | Physics . . . . . 3             | History . . . . . 3             |
|       | Bot. or Zool. . . . . 3         | Bot. or Zool. . . . . 3         |
|       | <u>20</u>                       | <u>20</u>                       |
| III.  | Mod. Lang. . . . . 4            | Mod. Lang. or Lt. . . . . 4     |
|       | English . . . . . 3             | English . . . . . 5             |
|       | Mod. Lang. . . . . 4            | Alg. and Geom. . . . . 4        |
|       | Alg. and Geom. . . . . 4        | History . . . . . 4             |
|       | History . . . . . 2             | Ast. and Meteorol. . . . . 3    |
|       | Ast. and Meteorol. . . . . 3    | <u>20</u>                       |
|       | <u>20</u>                       |                                 |

**EXHIBIT B.—Concluded.**

| Year. | Modern Languages.              | English.                          |
|-------|--------------------------------|-----------------------------------|
|       | Mod. Lang. . . . . 3           | Lat. or Mod. Lan. . . . . 4       |
|       | English . . . . . 4            | English . . . . . 4               |
| IV.   | Mod. Lang. . . . . 4           | Chemistry . . . . . 3             |
|       | Chemistry . . . . . 3          | Alg. and Trig. . . . . 3          |
|       | Alg. and Trig. or History. . 3 | Hist. and Geol. . . . . 3         |
|       | Geol. and Physiol. . . . . 3   | Geology (4), Physiology (4) . . 3 |
|       | <u>20</u>                      | <u>20</u>                         |

In Exhibit C will be found a proposed revision of the model high school courses submitted by the Committee of Ten, and in this arrangement some attempt has been made to meet the objections previously mentioned.

**EXHIBIT C.**

| Year. | Classical.                     | Latin-Scientific.        |
|-------|--------------------------------|--------------------------|
|       | Latin . . . . . 5              | Latin . . . . . 5        |
|       | English . . . . . 5            | English . . . . . 5      |
| I.    | Alg. and Geom. . . . . 5       | Alg. and Geom. . . . . 5 |
|       | History . . . . . 3            | History . . . . . 3      |
|       | Ph. Geog. . . . . 2            | Phys. Geog. . . . . 2    |
|       | <u>20</u>                      | <u>20</u>                |
|       | Cæsar . . . . . 5              | Cæsar . . . . . 5        |
|       | English . . . . . 2            | English . . . . . 2      |
| II.   | Alg. and Geom. . . . . 5       | Alg. and Geom. . . . . 5 |
|       | Mod. Lang. . . . . 3           | Mod. Lang. . . . . 3     |
|       | First Greek . . . . . 3        | Chemistry . . . . . 3    |
|       | History . . . . . 2            | History . . . . . 2      |
|       | <u>20</u>                      | <u>20</u>                |
|       | Cicero . . . . . 4             | Cicero . . . . . 4       |
|       | Anabasis . . . . . 5           | English . . . . . 3      |
| III.  | English . . . . . 3            | Mod. Lang. II. . . . . 3 |
|       | Alg. and Geom. . . . . 5       | Alg. and Geom. . . . . 5 |
|       | Mod. Lang. II. or Elective . 3 | Biology . . . . . 3      |
|       | <u>20</u>                      | Elective . . . . . 2     |
|       | <u>20</u>                      | <u>20</u>                |
|       | Virgil . . . . . 3             | Virgil . . . . . 3       |
|       | Iliad . . . . . 4              | English . . . . . 2      |
|       | Mod. Lang. . . . . 3           | Mod. Lang. . . . . 3     |
| IV.   | Physics . . . . . 3            | Physics . . . . . 3      |
|       | Alg. and Trig. or Hist. . . 3  | Geology . . . . . 2      |
|       | Psychology . . . . . 2         | Math. or Hist. . . . . 3 |
|       | Elective . . . . . 2           | Psychology . . . . . 2   |
|       | <u>20</u>                      | Elective . . . . . 2     |
|       | <u>20</u>                      | <u>20</u>                |



EXHIBIT C.—*Continued.*

| Year. | Modern Languages.        | English.                     |
|-------|--------------------------|------------------------------|
| I.    | Mod. Lang. . . . . 5     | Mod. Lang. . . . . 5         |
|       | English . . . . . 5      | English . . . . . 5          |
|       | Alg. and Geom. . . . . 5 | Alg. and Geom. . . . . 5     |
|       | History . . . . . 3      | History . . . . . 3          |
|       | Ph. Geog. . . . . 2      | Ph. Geog. . . . . 2          |
|       | 20                       | 20                           |
| II.   | Mod. Lang. I. . . . . 5  | Mod. Lang. I. . . . . 5      |
|       | English . . . . . 2      | English I. . . . . 2         |
|       | Alg. and Geom. . . . . 5 | Alg. and Geom. . . . . 5     |
|       | Mod. Lang. . . . . 3     | History . . . . . 2          |
|       | Chemistry . . . . . 3    | Chemistry . . . . . 3        |
|       | 20                       | 20                           |
| III.  | Mod. Lang. I. . . . . 4  | Lat. or Mod. L. I. . . . . 4 |
|       | English . . . . . 3      | English I. . . . . 3         |
|       | Mod. Lang. . . . . 3     | Alg. and Geom. . . . . 5     |
|       | Alg. and Geom. . . . . 5 | History I. . . . . 2         |
|       | Biology . . . . . 3      | Biology . . . . . 3          |
|       | 20                       | 20                           |
| IV.   | Mod. Lang. II. . . . . 3 | Lat. or Mod. L. I. . . . . 3 |
|       | English . . . . . 2      | English . . . . . 2          |
|       | Mod. Lang. I. . . . . 3  | Physics . . . . . 3          |
|       | Physics . . . . . 3      | Alg. and Trig. . . . . 3     |
|       | Geology . . . . . 2      | Geology . . . . . 2          |
|       | 20                       | 20                           |
|       | Math. or Hist. . . . . 3 | Psychology . . . . . 2       |
|       | Psychology . . . . . 2   | Elective . . . . . 2         |
|       | Elective . . . . . 2     |                              |
|       | 20                       | 20                           |

Among the changes that may be noted are the substitution of a year of Greek for a year of science in the classical course, thus giving three full years' work in Greek, the introduction of a few hours of elective work in the last two years of the high school courses, a more logical arrangement for the order of the sciences,—chemistry being placed first because of its use in biology, and lastly, physics is placed in the fourth year of the course, so that the pupil may have the benefit of all the previous training in mathematics.

The work in algebra and geometry is increased from four

periods to five full periods per week, so that the two classes may alternate throughout the course, and the courses are further enriched by the study of psychology.

It is an extremely difficult thing to arrange a course of study that will be absolutely perfect or that will meet every objection. Such a task is well nigh impossible. The teacher of Latin in the university demands that five full periods a week shall be given to his department throughout the high school course; the teachers of English, mathematics, modern languages, and the various other departments make similar demands, and if we arrange a course of study in accordance with their wishes, we find ourselves under the necessity of requiring twenty-five or thirty recitations a week of each high-school pupil. This would prove entirely too strenuous for the average boy, and the chances are that he never would attempt to prepare himself for college. To be sure, our high schools should put forth greater efforts to improve their standard, but at the same time our university men must be less exacting and less arbitrary in their entrance requirements. Each should be considerate of the interests of the other, and only through their earnest co-operation can the best results be obtained. Conditions at present are very unsatisfactory, and the ideal is yet to be reached, but let us hope that it is not far distant.



## *The Study of Animal Life: Its Place in the Public Schools*<sup>1</sup>

PROF. S. J. HUNTER, UNIVERSITY OF KANSAS



HE Privy Councilor of the Czar of Russia, Prof. F. de Martens, writing on impressions of America after his visit last year, observes in our public schools that "The teachers avail themselves of every opportunity and chance of making their pupils ocularly acquainted with the objects of surrounding life and with the manifestations of nature."<sup>2</sup> In a sentence he has given the trend of modern educational methods. Action is being substituted for imitation, the initiative for the imitative.

In the common schools, as in many others, it is frequently self-evident that to master books is the way to become learned, and to become learned is to become educated. This idea is a legacy from the Renaissance. Knowledge in itself forms but a small part of a well-rounded education. Training in methods of acquiring knowledge is more valuable than knowledge itself.

Since the study of animal life is not one of the established courses in many of our schools, the subject may resolve itself into three questions:—

1. How can this subject be conducted in a school where the required curriculum does not include it?

2. What is there in the study of animal life capable of furnishing certain fundamental disciplines not readily obtained in other subjects?

3. What is its place and function in our common schools?

A few illustrations from actual experience may answer the first question. A class of boys manifested a decided aversion to grammar. They were more interested in the proper angle at which a pin should be bent to serve best its mission. The

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1. Abstract of an address before the general session of the Kansas State Teachers' Association, December 30, 1902.

2. *The Independent*, Vol. LIV, p. 2870, December 4, 1902.

time was spring, the recitation period, the last in the afternoon. The grammars were laid aside. Each boy, instead of a grammar lesson, was assigned a bird: one the robin, another the jay bird, another the sparrow, and so on. The boys were dismissed at the beginning of the recitation period to study their lesson. The getting out before close of school,—that part of the scheme appealed to them you may be sure. They were required to spend the time watching and taking notes upon the bird assigned in its native haunts. The class convened once or twice a week to hear the written reports read. These compositions were rendered grammatically correct, the greater part of the criticisms being made by the class. At first some of the members took little interest, but when some others read stories that attracted the attention of the whole school, they, too, went to work. The nest-building stories and narratives concerning the feeding of the young required hours of patient observation. These boys began to spend their Saturdays in the woods, students of nature, away from the contamination of the street. At the end of the term they had a practical knowledge of grammar not gained by committing all the rules of syntax.

Every ambitious teacher racks her brain to find subjects of proper benefit for the morning exercises. The migration of birds could be made to furnish an almost unlimited series. Beginning with the fall, the teacher can ask the children what birds they saw flying south that morning. The first hand up may say a flock of blackbirds; then the blackbird can be the theme for the morning. Find out what each one knows about the blackbird: the different colors of the various kinds, their manner of flight, the nesting habits, various mating calls and songs, all information to be gained from the volunteers in the school. Each morning during the migratory season other birds will be reported until the migration is over. Each bird can be treated along the same general plan. Many questions will arise which cannot be answered at that time. Have them recorded, to be answered, if possible, the following spring. At the close of the migratory season an answer may be sought to the question, "Why do birds migrate?"

The leaves will now be off the trees, and this is the proper

time to study birds' nests, for the eggs are gone and the birds are through with the nests, though the nests are still as good as new. They can be collected and brought to the school, and examined, compared, and contrasted. The names of the birds that built some of the nests may not be known. These can be laid aside to be compared with nests the birds are building the following spring. I know of a district school where the location of all the birds' nests in the vicinity are charted at this season of the year. It is especially noted what birds always build high, and what build low, and whether the same species choose annually the same location. Charts of this character, carefully prepared by the same school for several consecutive years, would become a contribution to ornithology. Follow this by a study of the winter birds, those that we have with us always. In what respects do they differ from the migratory birds? using one bird as a topic in securing all information the pupils have obtained from their outdoor study of this bird. A teacher can suggest other things that would be of interest to note, and so lead them on. The pupils will now be anxiously waiting the return of the birds they saw flying south in the fall. Some boy or girl will be the first to exultingly proclaim sight of the first robin; and probably nests will be built before school is out, and the year's morning exercises will have been spent profitably for both teacher and pupil.

A Mason fruit jar, half full of water, situated on the teacher's desk, was the place where a tadpole spent its life. This immature frog was the special charge of the physiology class. By offering it every conceivable form of food they ascertained what it liked best. At every intermission members of the class could be found around that jar discussing the appearance of the limbs, first the hind, then the fore. The tail was an object of great interest. What was to become of it? Would it be dropped or absorbed? And then one day they discovered that this animal had ceased to be exclusively aquatic; that it needs must live a part of the time out of the water on the land.

A girl in one of the more advanced classes, but without previous training in zoology, was told to observe in her walks to and from school and around her home the grasshoppers in the grass

and then those dwelling in the roads and bare exposed places. Without further suggestion she was asked to write upon their colors. After describing the places of observation and kinds of grasshoppers found, there being green grasshoppers in the grass and brown ones in the bare exposed places, she observes that grasshoppers usually stay at places resembling their bodies in color. "This shows," she says, "that the animal has the power of telling the color of objects." "This serves," she continues, "to protect the grasshoppers from snakes, birds, and even from people, as in their color they are so nearly like the objects around them that we ourselves can hardly see them."

It has been my experience that in many respects insect life affords the best material for school studies. A lamp chimney placed upright in a box of dirt is the mode of breeding cage in general use. Here caterpillars will grow and molt in the fall. They will transform to chrysalids to hold the attention. With anticipation the spring emergence will be awaited. At the proper time the teacher can procure eggs of the silkworm moth for the asking. The osage orange will furnish food for the caterpillars. Every stage in growth and development can be noted, and when the cocoon is spun the pupils are ready to inquire into the nature of silk and the manner of silk making.

Collections of insect forms by scholars during the summer months furnish valuable material for language work or free-hand drawing as well as a reserve fund for general exercises. Did you ever establish an ant's nest in the schoolroom? If you have not, do so, and rely upon a copy of Lubbock for suggestions.

Then there are the rich opportunities afforded in tramps across the fields and through the woods with members of your school for companions. The rural school teacher, whether on prairie or in woodland, excels in the equipment of her natural history laboratory.

Before leaving the question of how, I must tell you of another way, a plan used by a well-known teacher. His chosen field was literature. Natural science was assigned to him because there was no one else to take it. Under such circumstances many a teacher would have slighted the subject. On the contrary this teacher formed his students into a natural history club. They

met on stated evenings, the members making excursions and observations in the meantime, reporting their results at these meetings. This occurred some fifteen years ago. I have taken occasion to make some inquiry into the pursuits of its members, and find that a majority of them in whatever vocation now engaged have continued their interest and study in some phase of nature. Some have chosen this field as their life work.

2. What is there in the study of animal life capable of furnishing certain fundamental disciplines not readily obtained in other subjects?

The instances just cited illustrate the intent of the study,—a “direct observational appeal to natural phenomena.” Much skill should be exercised by the teacher in the selection of such subjects for study “as shall really be within reach of the pupils’ own observation and understanding.” In accordance with the ability of the scholars, scientific methods should be introduced—observations, generalization, comparisons, deduction, experimentation, development of critical and unprejudiced judgment in forming conclusions. Such methods will be inculcated more by example than by precept. Let the subject be presented from the disciplinary, not the sentimental point of view. A test of results will be shown in the desire and ability of the pupil to carry the study further. These are the sentiments of Prof. W. M. Davis, recently expressed concerning nature study in general.<sup>3</sup> They apply equally well to the subject in hand.

In every phase of this work there must be the same seriousness of thought and purpose which has so long characterized instruction in mathematics. The pupils are to be assigned problems that will require in their solution exertion equal to that called into play by any other school task. Under the head of nature study there has been a tendency to treat of generalities, to glance at the superficial, and pass on. To such an extent has this been carried on that it is sometimes justly queried, “What is nature study?”

It is quite possible that some of our teachers do not feel themselves capable of conducting work along these lines. To such

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3. *Science*, N. S. Vol. XVI, p. 911, December 5, 1902.

Froebel says: "Let not the teacher of a country school object that he knows nothing about natural objects, not even their names. Even if he has had the scantiest education, by a diligent observation of nature he may gain a deeper and more thorough, more living, intrinsic, and extrinsic knowledge of natural objects in their diversity and individuality than he can acquire from ordinary available books."<sup>4</sup>

The successful teacher is well grounded in the subject. He does not use his fund, however, as a free gift, but as a means to enable him to make fitting suggestions which will lead the pupil to discover the facts. I would not have you understand that the teacher is to get all his knowledge secondhand. The literature at hand serves simply as a guide to enable him to work out in the field the course he proposes to give his school. In order to do this work well and thoroughly it is not necessary for the teacher to become familiar with every phase of animal life. Become proficient in those forms that are accessible. This should be the invariable rule. To serve its purpose the study of animal life in the common schools is essentially a study of things, not books. The study of marine life can never be properly conducted away from the seashore, nor tropical life well presented in the temperate zone. One class of pupils may study one set of animal forms, another class an entirely different set with equal benefit. Huxley in his introduction to the study of the crayfish, says: "I have desired to show how the careful study of one of the commonest and most insignificant animals leads us, step by step, from every-day knowledge to the widest generalization and the most difficult problems of zoology, and indeed of biological science in general." I am fully aware that the teacher's preparation is a most important factor in the proper conduct of the work. Though the teachers may not yet be fully equal to the occasion they soon will be. The most advanced specialist really knows only a little about a comparatively few animals. It was not so long ago that Latin in the high school met opposition because of want of teachers properly equipped. To-day this is one of the best taught subjects in the schools.

The trend of education is for action, not imitation. In sub-

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4. *Education of Man*, p. 201.



stantiation I quote Professor Burnham : " The great maxim of modern reform in education is the activity of the pupil instead of the didactics of the teacher. There are but two methods of instruction : as regards the pupil, the active and the passive ; as regards the teacher, the method of demonstration and the method of suggestion. The active method of the kindergarten and the university should be adopted in all the grades."

It is the discipline involved, not knowledge of particular forms acquired, that constitutes the content of the subject. The first object is to teach the pupil to gather knowledge at first hand. Though much less in amount, this is the kind of knowledge upon which we have to base our own actions and decisions. A man who must gather all his ideas from some other person or authority is likely to become a prey to the demagogue or unscrupulous party leader. Many times the teacher will be asked a question which she cannot answer, and to all such questions she should frankly say, " I do not know, but we will try to find out " ; and teacher and pupil both become investigators.

In this study the pupil comes to realize the economic values in animal life. On the one hand, the good—insects as scavengers, as fertilizers of fruits ; birds as destroyers of injurious insects and noxious seeds ; game ; fishes ; and other beneficial animals. On the other hand, the evils—insects as disseminators of disease and destroyers of crops, as well as the pernicious effects of other animals. Then there is the constant struggle for existence among all forms of life.

The mistake has been made of introducing natural science studies into the high school, and then through it down into the grades. The kindergarten is the proper place for the introduction of the study of animal life. A child taken from nature into the public schools is usually brought into an atmosphere of conventionality. Here he is taught not to act, but to imitate. He is not encouraged to observe or to think, but to remember. Upon his ability to commit the written or spoken ideas of others his scholarship ranks. He becomes proficient in rote learning. The effect of burdening the mind with words and expressions meaningless to him is not thought of.

The opening pages of every first reader contain pictures of the cat, the dog, and the rat. Children are fond of animal pets. Young minds are readily induced to observe things that live and move. The child just beginning to toddle about watches with interest every move of the robin hopping around in the dooryard. Are not these outdoor studies the natural conveyance on which to bring these little kindergartners up to things bookish?

I would not have it understood that this study is in any way to supplant the three R's; they have their place. Nor does the study of animal life claim any superiority over botany or the other sciences, which are in themselves the study of things, only in so far as active moving things more readily elicit the interest and attention of the young. In the primary department is the place to introduce observation of living, active, moving forms. Pupils who have spent eight or nine years of study almost exclusively bookish do not even know how to go about the study of a thing. They may be able to receive a grade of 100 repeating what the teacher told them or what the book says. A scholar in language composition whose only source of information is the encyclopedia cannot write naturally or freely upon the subject assigned. At best he will only paraphrase. In no way is the ability of his original self appealed to. On the contrary, such assignments tend to stultify the intellect. A pupil trained to observe and record what he perceives directly through his own senses or efforts soon begins to feel his own power and independence. No course of training better enables him to appreciate the written observations of others. At all times it is necessary to bear in mind that in this work it is the pupil that is to be taught, not the subject. It is the mental discipline involved, not the mere knowledge of particular forms required, that constitutes the value of the first hand contact with nature. The danger lies in attempting to study too many things. Whatever is done should be done thoroughly and systematically. Avoid above all things that flavor of knowledge—a smattering.

You have heard much of the three R's. The study of animal life adds a fourth "R"—Reasoning. Those who rank first in

their class examinations are too frequently not those most fitted for the work of the world. Such may excel in acquisitive power; too often they lack in individuality and the power of exercising the initiative. It is an inspiring discovery to a growing mind to feel and realize that all knowledge is not written, and that the pupil himself can make acquisitions to the funds.

3. What is its place and function in our common schools?

The study of animal life fills the chasm which too often exists between the recitation bench and the teacher's desk. Teacher and pupils become fellow-students together, fellow-companions in a common interest. The day is past when teaching is done by rule and ferrule. The personality of the teacher is at par with his knowledge. Questions, answers, topics, have their use, but there should be a time when the teacher can naturally and easily inspire pupils to do their best.

The study of animal life has a place in the rural school. It acquaints the pupil with his environments. He comes to recognize his relation to his surroundings. He comes to see that there is much around him which is elevating, satisfying. He begins to realize his opportunities. I have seriously questioned the propriety of placing on school walls the faces of authors, inventors, statesmen, warriors, omitting the stock breeder, who has devoted his life to the betterment of the best in horses and cattle, the horticulturist, who has perfected staple varieties of fruits. What class of beef, mutton, and pork would we have had without studious men whose lives have been devoted to their perfection? The gnarled crab instead of the wine sap and the Jonathan would be our portion had the horticulturist never taken up his work. Does the impression unwittingly go out from the schoolroom that success can be attained only amidst the merciless, pitiless struggle on the overcrowded street, where too often subsistence is success? Are the possibilities of rural vocations, stock raising, plant breeding, horticulture, and allied sciences properly set forth in our rural institutions?

Instruction in this and kindred subjects in the common schools has its bearing on the work of the university. Directly, the university would be more effective if it could be furnished with students already grounded in persevering, painstaking, scientific

habits of thought and action. A student who comes to the university with such preparation is at once more capable, more effective than the one who has still the elements of such a training to acquire. It may properly be asked whether the later can suffice for the earlier training. Indirectly, the inculcation of the scientific spirit in the common schools will do much to disseminate the same thing among the people. From this there will result a constant public sentiment favoring and co-operating with scientific research, a sentiment sadly wanting at the present time.

In such work there is a moral value. Says David Starr Jordan: "Thought without action ends in intense fatigue of soul, the disgust with all the 'sorry scheme of things entire,' which is the mark of the unwholesome and insane philosophy of pessimism. This philosophy finds its condemnation in the fact that it has never yet been translated into pure and helpful life. With our children the study of words and abstractions alone may in its degree produce the same results. Nature studies have long been valued as a 'means of grace' because they arouse the enthusiasm, the love of work, which belongs to the open-eyed youth. The child blasé with the moral precepts and irregular conjugations turns with delight to the unrolling of ferns and the songs of birds. There is a moral training in clearness and tangibility."<sup>5</sup>

It has a religious value. The love of nature induces love of its Author. Tennyson addresses the flower:—

" If I could understand  
What you are, root and all, and all in all,  
I should know what God and man is."

Finally, the purpose of education is character building. The essence of character building lies in action, not imitation. Pupils forget precepts and historical examples. Remembering them, they are unable to fit them to themselves and to the occasion. Independent thought and action rightly developed and continuously directed soon become the habit, a part of the individual. Between the kindergarten and the university, character is largely determined. In this period, then, do the educative values of studies in animal life find their highest fulfillment.

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5. *Addresses and Proceedings of N. E. A.*, 1896, p. 138.

## *Free Text-Books in City Schools*

**I**N January, 1903, certain inquiries were addressed to the superintendents of schools in 161 cities of twenty-five thousand population, or over, in the United States, by the Department of Education in Washington. Among these questions were the following: 1st. "Are text-books furnished free to all the pupils in any of the grades in your city schools?" 2d. "In what year did the city begin to furnish free text-books in any of the grades?" 3d. "In which grades of your school are they now furnished?" Responses were received from 158 of the 161 superintendents. In many cases the information was not complete; but the following statements will indicate with some degree of accuracy the present state of the free text-book question in the United States. The facts and figures given were furnished us by Dr. Wm. T. Harris, of Washington. The full statement will appear, we understand, in the next report of the department. We give these facts to our readers in the belief that there is at the present time considerable interest in the question. This has been indicated to us by the number of inquiries we have received for articles in the back numbers of *EDUCATION* on this subject. These inquiries have come to us from superintendents and others in different parts of the country. We believe that the time is coming when text-books will be furnished free in all public schools of the United States.—EDITORS *EDUCATION*.

In answer to the first question the following cities replied "Yes": New York,\* Philadelphia,\* St. Louis,\*\* Boston,\* Baltimore,\* Cleveland,†† Buffalo,\* Cincinnati,†† Pittsburg,\* Detroit,\*\* Washington,† Newark,\* Jersey City,\* Minneapolis,\*\* Providence,\* Denver,\*\* Toledo,\* Allegheny,\* Worcester,\* Syracuse,\*\* New Haven,\* Paterson,\* Fall River,\* Omaha,\* Scranton,\* Lowell,\* Cambridge,\* Seattle,\* Hartford,\*\* Reading\* (Pa.), Wilmington,\* Trenton,\* Lynn,\* Lawrence,\* New Bedford,\* Des Moines,\* Springfield,\* Somer-

LXIX-LXX  
U.S.C. Vol. I. 1800

ville,\* Hoboken,\* Manchester,\* Peoria, Salt Lake City,† Duluth,\* Erie \* (Pa.), Elizabeth,\* Wilkesbarre,\* Harrisburg \* (Pa.), Portland \* (Me.), Yonkers,\* Norfolk,\* Waterbury,\* Holyoke,\* Houston,\*\*\* Akron,† Saginaw,\* Lancaster,\* Lincoln \* (Neb.), Brockton,\* Binghamton,\*\* Pawtucket,\* Altoona,\* Springfield \* (Ohio), Haverhill,\* Spokane,\* Salem,\* Johnstown \* (Pa.), Allentown,\* McKeesport,\* Chelsea,\* Chester \* (Pa.), York \* (Pa.), Malden,\* Newton,\* Bayonne,\* Fitchburg,\* Superior \* (Wis.), Taunton,\* Butte,† La Crosse,\* Williamsport,\* Newcastle,\* Woonsocket,\* Atlantic City,\* Passaic,\* Bay City,\* Gloucester,\* South Omaha,\* New Britain,\*\* Council Bluffs,\* Cedar Rapids,\* Easton \* (Pa.), Little Rock \*\*\* (Ark.).

Those answering "No" were: Chicago, San Francisco, New Orleans, Milwaukee, Louisville (Ky.), Indianapolis, St. Paul, Rochester, Columbus (Ohio), St. Joseph, Los Angeles, Memphis, Albany, Portland (Ore.), Atlanta, Grand Rapids, Dayton, Richmond, Nashville, Bridgeport, Oakland, Troy, Evansville (Ind.), Utica, Charleston (S. C.), Savannah, San Antonio, Kansas City (Mo.), Fort Wayne, Youngstown, Covington (Ky.), Wheeling, Mobile, Birmingham (Ala.), Galveston, Tacoma, Terre Haute, Kansas City (Kan.), Dubuque, Quincy (Ill.), South Bend, Almira, Davenport, Springfield (Ill.), Topeka, Sioux City, Knoxville, Schenectady, Rockford (Ill.), Canton (Ohio), Montgomery, Auburn (N. Y.), Chattanooga, E. St. Louis (Ill.), Joliet, Sacramento, Racine, Jacksonville (Fla.), Oshkosh, Pueblo (District No. 1), Fort Worth, Joplin (Mo.), Jackson (Mich.), Dallas, and Augusta (Ga.).

Those with one star report text-books furnished free to pupils in all grades; two stars, elementary grades; three stars, grades 1 to 4, inclusive; dagger, 1 to 8, inclusive; two daggers, 3 to 8, inclusive. Peoria, Ill., 1st grade only.

The dates given in answer to question No. 2 so far as supplied are as follows: 1830, Jersey City; 1838, Newark; 1850, Elizabeth; 1855, Hoboken; 1856, Charleston; 1860, Paterson; 1864, Chester; 1865, Norfolk; 1870, Passaic; 1874, Fall River; 1875, Wilmington and Johnstown; 1877, Woonsocket;

*before 1874*  
 1878, New York; 1881, Lowell; 1882, Yonkers and La Crosse; 1883, Holyoke; 1884, Brockton, Fitchburg, Malden, Salem, Haverhill, Taunton, Gloucester, Baltimore, Worcester, Cambridge, Lynn, Lawrence, New Bedford, Springfield (Mass.), Somerville, Boston, and Newton; 1885, Saginaw and Chelsea; 1886, Duluth; 1887, Lancaster, Syracuse, and Trenton; 1888, Omaha, Scranton, Binghamton, Altoona, and Atlantic City; 1889, Bay City, Easton (Pa.); 1890, New Haven, Manchester, Portland, (Me.); 1891, South Omaha, Superior, Lincoln, Harrisburg, Washington; 1892, Detroit, Reading (Pa.), Salt Lake City, and Wilkesbarre; 1893, Buffalo, Minneapolis, Providence, Denver, Allegheny, Erie, Pawtucket, Allentown, York (Pa.), Bayonne, Williamsport, and Newcastle; 1894, Pittsburg, Toledo, McKeesport; 1895, Springfield (Ohio); 1896, Akron, Waterbury; 1897, St. Louis, Seattle, Butte, New Britain; 1898, Spokane; 1899, Cincinnati, Des Moines; 1900, Peoria, Houston; 1901, Cleveland; 1902, Council Bluffs, Cedar Rapids, Hartford.

NOTES.

I. In St. Louis free books and stationery furnished all grades, September, 1903; in Cleveland, spellers, 3 to 8 grades, inclusive, geographies, 4 to 8 grades, inclusive; Jersey City (N. J.), since 1848, all grades; Oakland (Cal.), certain supplemental books furnished in elementary grades; Peoria, readers to all elementary grades; Duluth, readers only; Wilkesbarre, readers only; Little Rock, supplemental readers only; Auburn (N. Y.), though answering "No" yet reports readers furnished; East St. Louis (Ill.), reports supplemental readers furnished; Joliet reports supplemental readers furnished; Oshkosh (Wis.), only music books and supplemental readers; Woonsocket (R. I.), French, German, Latin, and Greek books not furnished; Bay City (Ind.), high school included in 1899.

II. According to latest volumes of school laws on file in the Department of Education at Washington text-books are furnished free in the following named states: Delaware, District of Columbia, Idaho, Maine, Maryland, Massachusetts, Nebraska, New Hampshire, New Jersey, Pennsylvania, Rhode Island, Vermont and Wyoming. In the following named states, authority is vested in local boards or voters to determine whether text-books shall be furnished free: Colorado, Connecticut, Iowa, Kansas, Michigan, Minnesota, Montana, North Dakota, Ohio, South Dakota, West Virginia, Wisconsin and New York.

*Supp. of Keedle of N.Y. City - (Miss Reps 1877)  
 Sec. & State Supp*

## *Education at American Expositions*

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GREAT exposition is a great educational opportunity. It touches education in many ways and on many sides. It brings together vast collections of facts which furnish unique facilities for observation and information. It does more,—it brings various facts into juxtaposition so that relations may be more clearly seen. Previously observed relations and processes founded on them are thus vivified, and enter into the thought of larger masses of people. Furthermore new relations may be discovered and new facts begin to be. Two powers are thus manifest, the power to present or “expose” facts, and the power to influence and modify ideas and ideals. An exposition is therefore in all its parts educational. But it is not of the general educational facts that I wish to speak here particularly, but of school exhibits, their scope and aim. My observation in several expositions, more intimate relations with one of them, and experience in planning and installing local exhibits will perhaps give a certain force to the following reflections and suggestions which abstract thought alone could not produce.

The well-defined character of the exposition determines the general plan and method by which it accomplishes its results. The plan must naturally be a broad one. In education it must touch all departments and cover all phases of each department. Special effort must be used also to make the exhibit truly educative, for it is a paradox too often illustrated that not all educational plans are educative. Again, most of those who visit expositions must confine their observations to a few hours or, at the most, to a few days. Exposition teaching must therefore be an instantaneous process. Nowhere in life is it more necessary that truth should be so plainly presented that “he who runs may read.” Every pedagogical principle and device must be employed in the educational exhibit to fulfill the demands of method.



One of the most conspicuous functions of an educational exhibit,—one, too, which it can most readily exercise—is that of representing graphically and impressively the larger and more external features of education. Tabulations, charts, diagrams, drawings, swinging frames, apparatus of various kinds, and groups and volumes of specimen exercises,—or written results of exercises,—outlines, reports and other literature have been used with a good deal of success to impress such facts as have been referred to. Facts as to universality, scope and completeness of education; facts as to its progress and effectiveness; facts as to “spheres of influence” or avenues of approach to the individual; facts as to educational processes among those who differ in various degrees and ways from the normal; facts as to the nature and extent of the various periods into which school life is artificially divided; facts as to courses of study and the various phases of the subjects included; facts as to graduation, correlation and classification,—all these the system of graphics employed reveals with greater or less completeness. In this display the uniformity and pervasiveness of education are readily seen. By an easy generalization also there comes to view a kind of American ideal, at least as regards forms of education, which has become one of the most powerful unifying and amalgamating forces now at work in the heterogeneous elements of our population.

But an exposition goes beyond the larger and more external features of our educational system. Any worthy collection of educational results will show some of its more subtle and delicate forces, its life and principles of operation, and its evolution. First, it will indicate the passing of the old idea embodied in the expression “mental development” or “mental discipline,” and the influence of the more human view of education which makes a well-developed brain depend on the development of all parts of the human organism, the training of each part registering itself in some new brain power and thus contributing to a more perfect whole. It should impress the thought that in a very important sense a well-developed mind is a well-developed body; that school subjects broadly treated express themselves in the healthy growth of brain areas and healthy nerve action

generally, while, if narrowly treated, they issue in a correspondingly narrow growth and narrow efficiency. The graphics of school exhibits have done little in this direction as yet, but they may easily show our present position in the matter and suggest new work.

As has already been suggested, the omnipotence of education in meeting all educational conditions is naturally impressed at an exposition. An easy grouping of exhibits may show in a most forcible way that there is no class of people which education does not reach, and in which it does not show its power to modify and develop, not by traditional means only, but by new modes of awakening and promoting mentality. Among these modes again we touch the physical. A good exhibit will show the direction and rate of departure from the old mind theory, and emphasize the many-sidedness of education.

Looked at in greater detail, a well-organized collection might impress ideas of interrelation and correlation, and the vital principle working through all,—in other words, ideas of a living and growing organism such as our educational system really is. At present pedagogical insight would detect, among many signs of healthy development, various defective conditions for growth, some false growths, some disease germs, because education has often suffered from neglect, and from untrained and unthinking, that is unscientific, effort. One of the most helpful results of an exhibit in which the whole school organization comes graphically to view would be the discovery of false and dangerous elements, ill-adjustments, non-assimilation, misconception and perversion of the new, misuse of the old. A most important element of true progress is a discriminating knowledge of the present, which, though nearest to us, is frequently neglected or misunderstood.

From another point of view this organization of material may have a reflex influence on civic life, for the principles involved are at the base of civic virtue.

An exhibit also furnishes material for the student of the history of education. It does it in one way unwittingly. One finds the old formal course still present as a nucleus, or more than a nucleus of our modern course. But he cannot help

noticing that its self-complacency, which had brought it into a static condition, has given place to a healthy agitation and doubt, and an encouraging, though sometimes groping, sometimes superficial, attempt to find something better. Grouped around this ancient form are found various new elements, at present showing a crude and illogical development, and the lack of unifying principle, which is needed before the best in education can be forthcoming through the combined influence of congenitally related parts. The educational exhibit, by revealing such deficiencies, gives a stimulus to progressive work in selecting, unifying, and organizing educational material, and thus fulfills one of its most legitimate functions.

A fuller and broader historical study would be possible if, with careful discrimination and a fine feeling for proportion, directors of exhibits would deliberately collect and prepare historical material illustrative of different epochs in our educational development. Such effort would be educative, both for those who give and for those who receive. The historical sense would grow thereby. Educators are stronger for the problems of the present, if they have the broad thought which rests on a knowledge of the various phases through which education has passed. It is not a matter of educational luxury, but almost of educational necessity, to know how various peoples, communities, organizations, and individuals have planned to transmit or modify national or local ideals. It is especially necessary to know the historical development and relations of education in one's own community or group. In this way come educational perspective, a broad "historical consciousness," and, consequently, a truer insight into education, which qualify one to direct in present problems and to forecast the future with greater power and safety. The Government has furnished some means for impressing the history of education at expositions, but the matter has been generally neglected. Future exhibits should treat this side of education more generously.

Still another phase of historical study offers itself. Man in reaction on his environment first gives particular attention to the physical or "sensational"—to the grosser necessities of life. This is no occasion for disparagement. It is the natural

order of growth, whether in the individual or in the nation. Later, with new accretions and modifications in organism and function, comes a throng of new desires, of new impulses to self-realization, of new possessions. A more complex, though still unformed, life is manifest. It is the initial period of so-called culture. There is a reaching out in every direction, physical and spiritual. Culture demands and culture material are present in profusion, but they are as yet unorganized. Later still come organization, fine adjustment, perfection of function, a new stage of culture. The three periods referred to are successive ones in any homogeneous section of society; but in such aggregations as are found in our own country and in other countries all these stages of development may be contemporaneous. Exactly the same course of development and corresponding phenomena appear in education. The course of education in this country affords a general illustration of the point. Even the most primitive type is found here, if we consider the plans of the aborigines for training the younger members of the tribe. Our educational fathers began with an adaptation of traditions from Dutch and English sources. The education which they provided was a combination of the practical and formal, but it was chiefly formal. Conditions did not favor philosophy of education. Then our educational conscience and consciousness began to awake. There came a throng of new educational ideas, as yet unformed and unorganized, their meaning hardly understood. The mere suggestiveness of a dawning maturity impelled us to reach out for something unlimited, undefined. It might be called the adolescent period of our education—the period of strong emotion waiting for fuller interpretation. A wealth of ideas and facts resulted, but they were not fully related and correlated. We had been passing through such a period when the Columbian Exposition came. It showed some of the characteristics of this epoch, some signs of the future. Later expositions have shown little advance. It remains for future expositions to present education as a science.

Like everything else that expresses human thought and activity, the exposition represents a growth, an evolution. The

evolutionary feature is in a way more striking as we consider any portion of the whole, like the department of education, for there two evolutions meet,—the evolution of the department itself, and the evolution of what may be called the exposition of its plans and purposes. The second evolution has lagged behind the first in the department of education, so that it is all the more necessary that the next American exposition should consider more seriously certain modifications and additions in some of the lines we are here considering.

In past exhibits elementary schools have supplied an abundance, not to say superfluity, of material; secondary schools have shown a more modest prominence; technical schools, and, in certain particulars, universities, have been conspicuously represented. These three grades are closely connected, being parts of the same series. Exhibits translated into terms of relationship would probably indicate a looser connection than actually exists, although it must be acknowledged that in real school life the connection is not as intimate as the nature of the case demands. Future exhibits must give more attention to this point.

From one point of view there is, or ought to be, great unity in organization; from another view-point there is divergence. Different sections of school life are distinguished by marked differences in both physical and psychical life, and call for differences in culture-content and method. Distinction in content is manifest; distinction in method still awaits adequate recognition. It is beginning to be felt also that time-relations between the parts need revision, and plans for regrouping the years of education are being presented. An exposition gives a splendid opportunity to show graphically current practice and suggested reforms.

But while the three factors in our public school life have been prominent, the professional side of education has as a rule been conspicuously neglected. Outside of education for the technical professions, normal school work has perhaps had the best attention, yet results here fall far below an easily attainable standard. Exhibits could do much to advance professional standards and aims, and to induce a more scientific treatment in

law, medicine, theology, as well as in other lines which are regarded as more technically pedagogical.

Particularly should professional training for teaching, which is one of the basal conditions of success in all schools from kindergarten to technical college, university or professional school, receive more appreciative recognition. The necessity for such training, for all classes of teachers, should hardly need argument. The new spirit in professional training for teaching should be impressed. In this connection two topics may be specified without, by so doing, attempting to minimize others whose claims are older and more easily win a hearing. It is certainly time that the results of the study of child-life and adolescence should be more in evidence, especially as these fields of investigation lend themselves so readily to graphic emphasis. They represent the human side of education,—the true point of approach to so-called subjects of study. The study of these two phases of life has passed its initial stage when much work was done by untrained persons and was necessarily fragmentary, and tempted unfounded conclusions. A large body of experts is now interested in these subjects, so that facts as to nascent periods, children's interests, adolescent psychology, and various other absorbing topics can be easily collected. The next exposition should present the results of their work, which are of vital concern to education. It should do this in the best exposition manner, so as to impress a larger number than is reached by the method of the printed page. "Subjects" have held the field; now let the child have a chance.

An educational exhibit presents still other opportunities for influencing and advancing education, which are at present largely neglected. In spite of all that has been accomplished exposition education is in a way largely spectacular (using the word in a good sense). Again, it presents to the average teacher fragmentary suggestions and devices rather than the deeper principles and truths and more vital relations. Though this is natural, from the very nature of expositions, it is none the less deplorable. It is manifestly unnecessary. Occasionally I have found an exhibitor taking some pains to explain plans of work, but as a rule such matters are neglected or receive meager at-

tention. Without a rather exacting and prolonged study, which the majority of visitors cannot be expected to undertake, it would be difficult to secure much in the way of method and process; it would even be difficult to determine, quickly and easily, general plans of work. All these matters are legitimate factors in any comprehensive exhibit, and they are no less interesting and valuable than other educational factors. In reality, if rightly treated, they are vastly more interesting and helpful than others. The interest taken in processes is illustrated by groups of people conspicuously gathered in spots where the methods of doing things are illustrated.

I believe an important service would be rendered if teachers could have easy access to means for determining aims, means of reaching the aims, the significance and unity of a course of study, the psychological relation of the child to the educational process suggested by a sympathetic study of child-life, the relation of the school to institutional life, and other kindred topics, as viewed by educators from all sections of the country. The interaction of these views, which would inevitably result from study and comparison, would be most helpful. Unless my experience deceives me these matters can be presented graphically by means of charts. They can at least be presented, as is sometimes done, in prefaces to volumes of illustrative exercises. The prefaces should, of course, be brief, yet should be given somewhat greater scope than has been secured by those which I recall. But prefaces ought to be supplemented by some chart presentations. Those who can spend months in research in the educational department of an exposition have a wealth of material at hand for their work. If the above suggestions and others like them can be carried out, the transient visitor will find his just claims met, so that by the expenditure of an amount of time commensurate with average exposition visits, he can readily come into contact with more than educational facts. *Pari passu* the opportunities for research will be correspondingly increased.

Another means of presenting and enforcing educational thought deserves a few words. Sometimes the thought is embedded in more or less static forms. Again it appears in its pristine vigor, untrammelled, responsive, sometimes almost

without conscious obedience to definite laws. It is the latter phase to which I refer here. It has its definite claims, and offers definite rewards. A multitude of educational facts in the current history of education shows the personal attitudes of the school public,—teachers, students, and patrons. These facts can generally be tabulated and presented in a large way to exposition students, so as to impress them with the present status and trend of education from various view-points. The number of students following particular courses or pursuing particular studies; the ratio of the teaching force to the number of students in different departments; the number of professionally trained teachers in the different sections of our school system, including the university; the number of teachers who are giving attention to the study of the child and adolescent, or familiarizing themselves with the results of such study,—these and a hundred other statistical facts can be included in this part of exposition work.

If all the leading problems of education are given recognition, still other advantages will follow. A minor benefit results from the opportunity to secure at an exposition much that is now gathered by means of "questionnaires," with which teachers and school officers are plied and sometimes harassed. A larger benefit comes from the greater educative value derived by school authorities from the work of preparing school exhibits.

Finally there should be a place for the ideal in a school exhibit. Progressive educators and investigators see beyond the present aim, course, method, and organization. Some are using the reliable material which has been accumulating—material eloquent of newer and better things—to show the direction of advance or to formulate new plans. This movement should be encouraged. It should have graphic representation at the next great American exposition. The actual and the ideal will thus touch each other. This is not to court the visionary, for this work, being based on well-defined experiment and fact, is in close touch with the present. It is true that all sure progress comes through the patient process of evolution, but everywhere we are facing the ideal, and influenced by it. It is a part of practical life, and even suggested by it. History,



both past and present, is full of illustrations showing the power of the ideal to influence, direct, and hasten the evolutionary process. It is a part of the evolution of civilization, in which the human element in things is working under the inspiration of an ever-widening conception of the Divine. From its very nature the exposition is admirably fitted not only to picture the present, but also to enforce the ideal.

### *Judge Not*

Too much we judge our fellow-men  
By what their actions are;  
But we should deeper look to see  
The motives that inspire:  
For actions oft conceal the heart  
And are a veil to hide;  
Deep down into the heart then look  
To see the wish inside.

Quite different there we find some things  
From what they may appear;  
To understand another's soul  
We must draw very near,  
And let sweet sympathy e'er guide  
To show the heart concealed,  
For through the bond of loving hearts  
Will all things be revealed.

To stand afar and criticise  
Shows not the heart within,  
Thus, what is done with good intent,  
We, erring, may think sin.  
Let Charity's sweet mantle be  
Thrown over lives not understood;  
Instead of criticising them,  
Just try to see the good.

Moorestown, N. J.

MARTHA SHEPARD LIPPINCOTT.

## *The Co-ordination of Polytechnic Schools.*

S. EDWARD WARREN, C.E., NEWTON, MASS.



THE foreordination of polytechnic schools is attested by the constitution of man as a being endowed with large capacities for mastery over nature by making it tributary to him. Their co-ordination consists in placing and holding them in what is their true and should be their duly recognized relative position in a properly organized, complete educational system.

So long ago as 1866, in a pamphlet entitled *Notes on Polytechnic or Scientific Schools*, I said, in a "prefatory note," that "these . . . pages, put forth in advance of a possible fuller treatment . . . are an attempt to respond, even if but . . . provisionally, to much earnest inquiry concerning . . . polytechnic schools; and to the evident . . . need of correct popular information relative to them. It is hoped that they may also contribute to unity of sentiment and action . . . among their friends . . . especially their alumni, and their officers, and thoughtful and earnest members."

I have never hitherto found time, among many engrossing new cares and the duties incident to then unforeseen changes, to make and put forth the never wholly forgotten "fuller treatment" just alluded to. But a notable article by Prof. D. C. Jackson, in *Science* for April 24, 1903, entitled "The Potency of Engineering Schools, and Their Imperfections," reinforced by another article by Prof. R. H. Thurston, on "Functions of Technical Science in Education . . .," in *Science* for June 19, 1903, to which I should now, writing later, add "The General Efficiency of Technical Education," by Prof. W. C. Mendenhall, in *Science* for September 4, 1903, have so far revived my long suspended but never lost interest in my subject as to prompt me to prepare the present article. In it I propose to limit myself substantially to what have long seemed obvious fundamentals, with their normal consequences, yet which still

wait for fuller general recognition, and thence for more complete practical realization.

Historic, as distinguished from present-day, meanings have more or less encumbered or confused definitions of the successive grades of institutions of learning. Thus, taking the broadest of institutional terms in the field of education, schools have been defined<sup>1</sup> as "collections of persons brought together . . . for the purpose of imparting and receiving instruction." Further, "The word school is commonly applied to an organization intended to provide elementary, secondary, or professional instruction, and not to an institution designed to offer exclusively non-professional studies of college or university grade." Here, although a college, or a university, actually is a kind of school, according to the former of the two above quoted definitions, we have in the second definition the familiar contrasted coupling of the words school and college. Let us take a moment to reconcile the two definitions. When, for example, a father is asked if he is going to send his boy to college when he has done going to school, everyone would understand that only a secondary school, whether academy or high school, was meant. No one would understand that the father, in answering this question, had a thought of sending his son to college after graduating from a law, medical, or other professional school. Thus the college clearly appears to be not merely distinct in name and characteristic purpose, but also in educational grade; so that we have, 1. Elementary schools; 2. Secondary schools; 3. Colleges; 4. Professional schools.

To avoid suspicion of ambiguity the briefest rehearsal of the distinctive sphere of each of these grades may be pardoned.

Elementary schools, sometimes sub-graded as primary, intermediate, and grammar schools, are devoted to the most universally necessary elements of knowledge, reading and writing, well called the pass keys to all other knowledge that the pupil may come to desire or need; arithmetic and geometry as indispensable to the business and mechanical wants of common life; and some beginnings in other most generally useful knowledge, as history and geography; with such touches, at least, of nature

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1. Johnson's Universal Cyclopedia, article on "Schools."

study and manual training congruous to the locality as recognize nature as companionably linked to man, and also recognize the hand as the profitably teachable servant of the mind, and thence by reflex action a strengthener of the mind itself.

Secondary schools thence lead the growing pupil through larger study to a higher outlook, whence his broader view, seen also with larger self-acquaintance, may fairly enable him to judge, under advice, whether he wishes to go further in other than the great universal school of real life, and, if so, in what direction.

The college here meets and conducts those who do desire still fuller and higher knowledge for the love of it, and as mental gymnastics for disciplining the mental faculties, in behalf of the benefit of such discipline, or "culture," in whatever subsequent station or pursuit one may be found.

Finally, the professional school waits to receive and train any whose chosen life pursuit demands the full, exact and minute special knowledge immediately belonging to such pursuit, whether law, medicine, divinity, etc., or architecture, engineering, mining, etc.,—all to the end that the professional man shall most completely realize the ideal, that special professional life should rest as a massive column on the broad and ample base of the three preceding educational grades.

Returning from this digression, the same result, before found as to the proper number and natural order of educational grades, is reached by noting the growing tendency to require the college B.A. degree, or a more or less substantial equivalent for it, for admission to professional schools. For example, a number of French, Scotch, English, and United States theological schools are named in the Cyclopaedia article before referred to as admitting only bachelors of arts to their courses, and as conferring the degree of bachelor of divinity after three years. Likewise, while medical schools—also sometimes styled colleges—were first regularly organized in the United States in 1765, yet no uniform requirements for admission to them were required until 1892; but now, for example, the supervising body known as the University Regents of the State of New York "requires that, there,

all applicants for admission to medical schools must show that they hold a degree of bachelor, or master, of arts," or some prescribed substantial equivalent to these. Also, within the present year, the Journal of the American Medical Association states, as quoted, "that all the medical schools in the country now have a four years' course, this having been adopted this year by the last school with a three years' course." Similarly, Cambridge University, England, permits the last two years' of study for the B.A. degree to count as the first two years of the medical course, which leads through three more years to the degree of M.D., thus giving this professional degree after a five years' course. Finally, coming to law schools, continental law schools require a collegiate education for admission to them. In the United States the standard of admission to them, while declared to be far too low, is neither retrograding nor even stationary. Since 1895-1896 the Harvard Law School has aimed toward giving the degree of bachelor of law only to college graduates.

Such, in the three traditionally long and well-known professional schools of law, medicine, and divinity, the growing tendency is toward requiring college graduation, or something at least approximately equivalent, for admission to them, and thereby to confirm the natural order before found of elementary, secondary, college, and professional education.

But here, before entering on the question of the educational rank of polytechnic schools, or institutes, or by whatever other unessential variation of name they may be called, their distinctive character as comparatively recent, and as acting on different lines and for different specific ends, calls for a brief reference to the two grand divisions into which systematic education, in all its grades, naturally divides itself.

Creation, as we know it, shows us, first, man, as potentially head and lord, by being spirit in essence and endowed with reason, while clothed with a bodily form. Creation then sets before our eyes nature, as conquerable by man, and awaiting his action upon it to reveal its possibilities of service to him. Here we also have to note that principle of classification which

teaches that things definitively differ, not alone through the absence in each of what characterizes the other, but simply by the predominance in each of what is less conspicuous in the other. With this principle in mind, we find our way to say that intelligence, looking out on creation as an attractive object of study, will, according to its varying distinctive tastes, divide education into two mutually complementary, not mutually antagonistic, portions, both always present, though in varying forms and degrees. These are: humanistic education, which is primarily, though not exclusively, devoted to the study of man as appointed head; and naturalistic education, which is likewise primarily, but not exclusively, devoted to the study of nature as being to a marvelously great, yet still unknown extent, tributary to man.

Slightly expanding the last statement, the humanistic division of the total educational field embraces the study of the entire man, body, soul, and spirit; and thus leads to physiology, language, psychology, logic, esthetics, ethics, religion; and all these to an extent and by methods appropriate to the grade, from primary up, in which they are taught; and also all with more or less reference to nature as man's attractively instructive and illustrative environment, and as thus related to his being rather than directly to his doing and his having. Such lines of study have long been collectively known in educational nomenclature as the humanities, or referred to as humanism.

The complementary naturalistic portion of the educational field embraces the study of nature as the theater of much of man's earthly activities and the minister to his earthly wants. Hence come applied, as distinguished from pure, physics, chemistry, geology, natural history, mathematics, and astronomy, with drawing as the graphic language of industrial, as distinguished from purely ornamental, design; and all these, more as immediately related to man's productive doing and his consequent beneficial having, than to his being, as simply a creature of thought, however powerfully, by their reaction, they may compel him to be acutely and profoundly a creature of thought. So comparatively recent is this naturalistic, or "new" education, slowly, and at long intervals, heralded by such advanced

spirits as Archimedes, Galileo, Bacon, Kepler, and others, that it has no such long generally recognized name as its humanistic fellow enjoys.

A glance at the distribution of the matter of these two sub-fields of education will further elucidate their character. Both enter into and are fairly balanced in the elementary grade, where reading, writing, spelling, and drawing, also geography and history, can all be selected and taught so as to point young minds to both fields, in at least a rudimentary way.

In secondary schools—high schools and academies—two or more parallel courses, of equal length and equally filled, are not infrequently provided, representative of the two lines of study here described. Typical or “model” programs have been proposed by authorized experts, and to a large extent more or less fully followed as to studies and course titles in parallel courses, entitled, for example, “Classical,” “Latin Scientific,” “Modern Languages,” “English.” Still more pronounced is the case where separate institutions, whether of grammar or high school grade, represent the naturalistic more prominently than the humanistic line, and thence study things, and work in them, both theoretically and practically, under a well-ordered system appealing to intelligence. Examples of such schools are the Rindge Manual Training School at Cambridge, Mass., the Armour Institute, Chicago, and many others; in all which the studies, with ample practice in each, are grouped in simultaneous courses of three or four years in mathematics, science, language, drawing, and tool work.

Colleges suggest a passing remark on the widely and even amusingly variant historic meanings of the word. The most general meaning of college is simply a body of associates for an understood common purpose. Thus there were in ancient Rome colleges of soothsayers, and even universities of tailors. In ecclesiastical affairs the college of the apostles, or of bishops, are expressions still used, while in civil affairs we have the electoral college. Colleges, as educational institutions, long existed for the convenient association, for board, lodging, and study, of those who with common aims were attending a neighboring university. As schools in which instruction was also

given, it was mental discipline, or intellectual culture, aside from economic application to practice, that was long the traditional end sought; and, even down to less than a century ago and in this country, classics and mathematics were the principal if not the only means employed to attain that end. But now for a half century and more, modern languages and literature, natural sciences and economics, and parallel classical and scientific courses have been freely added; and, finally, numerous electives further add to freedom of choice among both humanistic and naturalistic studies, according to constitutional tastes and the ends contemplated in choosing.

In professional schools the demarcation is more conspicuous. Divinity, law, and medical schools, especially the two former, are emphatically humanistic. Medical schools, through the close connection between some of their studies, *materia medica*, therapeutics, etc., with chemistry, natural history, meteorology, etc., are, however, to a considerable degree of the naturalistic class. On the other hand, from no tenable definition that is or can be made of a profession, or of professional schools, can the naturalistic professions and their schools,—otherwise called polytechnic schools, as of engineering, architecture, mining, etc.,—be rationally excluded.

A profession, substantially, as well defined in the great recent dictionaries, is an occupation that properly involves a liberal education, or its equivalent, and mental rather than manual labor; hence, any occupation requiring special mental and other attainments, or special discipline. Accordingly the writers of the authoritative articles already referred to in these pages take it for granted as indisputable, and well understood by those entitled to speak with authority, that engineering is a profession in the full sense. Says Professor Thurston, "Technical education is admitted to include engineering, for example, which demands a most extensive and most intense preparation, and involves as large an amount of learning, especially in both pure and applied science, as any other vocation; as much as is demanded in the other schools of the 'learned professions,' once distinctively so called." And again, as to normal succession of the educational grades before described, he says, "General



education" [secondary or collegiate, that is] "has no place, as such, here" [in the technical school], "and the student should clearly understand that his education, in the ordinary sense of the term, should be obtained, and as fully and liberally as practicable, elsewhere."

We may then repeat that by any reasonable definition of a profession as an application, by trained intelligence of the higher departments of science to the larger and more complex arts of life, engineering is as much a learned profession as any other. It requires the higher mathematics, mathematical and experimental mechanics and physics, instrumental field practice and drawing of refined accuracy of method and execution; also chemistry and geology; and applies these to the designing and erection of structures of wood, stone, and iron, sometimes under most difficult conditions; also hydraulic works, and prime motors and other large machinery. This much, too, relates to but one of the two grand divisions of engineering, civil and military. Of these the former embraces the higher applications of science to the beneficent constructive arts of peace, that contemplate man as friend and neighbor and his face as a universal letter of introduction. The latter is devoted to the destructive, abnormal arts of war that contemplate man as foe and his face as a target. "Whence come wars and whence come fightings among you?"

But to return. Thus broadly defined, civil engineering has, like other both naturalistic and humanistic learned professions, large specialties, each sufficient to form a life pursuit. Thus, as law has its specialties of criminal law, maritime law, conveyancing, patent law, etc., and medicine its specialists, as surgeons, oculists, or for tuberculosis, tumors, etc., so we have civil engineering proper, that of lines of works with their accessories; also mechanical, mining, and electrical engineering. To these is closely allied all large architecture, as of cathedrals and large government or other buildings, for suitably designing which, relative to stability, the distinctively civil engineer's aid must be and is called in unless the architect is sufficient unto himself alike on the engineering and on the historic and fine art side of his profession.

Relative to these facts, it may be here noted that schools of engineering differ among themselves in that some of them organize separate parallel degree courses leading to the special degrees of civil engineering, mechanical engineering, mining engineering, electrical engineering, etc., or of B.S. in each of these engineering specialties. Other such schools, and among them some deservedly of highest and widest reputation, prefer to follow the older precedent, established by the humanistic professional schools, viz., that of giving a broad and thorough school preparation for general practice in the engineering profession, and then leaving the adoption of this or that engineering specialty to the favoring conditions and guiding circumstances of subsequent practical life.

An amusing but probably now generally outgrown misconception of what engineering is, sometimes used to appear in letters of inquiry forty and fifty years ago. Young men wanted to study engineering, not mechanics, physics, etc. What they evidently had in mind in making such inquiries, and others of similar character, was that instrumental field practice with levels, transits, chain, and rod, etc., together with the plotting of maps, constituted the essential substance of engineering; whereas these had the same relation to it that a carpenter's or a tailor's preliminary taking measures have to the finished work they are to do.

From the explanations now made, two results evidently follow. At least the older, fuller, and stronger of our United States polytechnic schools, however named, should be everywhere intelligently ranked as professional schools in the full sense, whether in habitual speech, or in the press, and in educational reports. Also, their loyal members will ever jealously honor their own true educational rank as professional students; lest by heedlessly admitting unworthy usages, or incongruous class nomenclature, etc., foreign to that rank they belittle their own position, and contribute to lowering the normal tone of their student life, and thus to confusing or dimming their proper professional student aims, ambitions, and prospects.

Two obstacles, however, but happily both of them comparatively small and easily removable, partially obstruct the com-

plete present realization of the ideal here outlined. These are the present mixed grades of study in polytechnic schools, and the customary nominal or minimum age—sixteen years—of admission to them. But here it should at once be recalled to mind that all our strongest polytechnic schools have courses of four full years, while some other, and traditionally termed professional schools, have courses of three, or sometimes even of only two years. Hence it is obviously fair to allow that from one to two years of the four can be rated as of collegiate grade, leaving the remaining two or more years of strictly professional grade. But further, these portions of the total four years are not formally separated and successive. Work, truly professional, is found in each of the four years; as the Rensselaer Polytechnic Institute, for example, is careful to explain explicitly under the head of requirements for admission to advanced standing, saying that a portion of these requirements cannot be made up elsewhere than at the institute. With this agrees the statement, quoted from its catalogue of March, 1903, before me, "Graduates of colleges of recognized standing are permitted to enter the institute without examination." Again, when as at present, the work of polytechnic schools is of mixed grade, as now explained, their rank should obviously be determined by the higher and later and larger, and not by the lower and earlier and lesser, portion of the work done in them. Finally, these views are further reinforced by the fact that, when as one of the examiners for admission to the Rensselaer Polytechnic Institute, while there, I several times made it a pleasure to ascertain to the nearest month the actual age of the entering class, and also to inquire how many of a list of twenty-two other subjects than those required for admission each applicant had studied more or less. The average age at entrance was eighteen years and three months, and the consequent age at graduation over twenty-two years; the average number of the twenty-two general subjects studied was 9.5; and during the last forty years a gratifying and encouraging, if not large, number of those admitted have been college graduates.

Thus, again, from every point of view, the polytechnic school is a learned professional school. Interesting confirmatory tes-

timony as to the hopefully temporary mixed character of present polytechnic school courses, and the desirability of more completely getting rid of it, is given by Professor Jackson in his article before referred to. He well says: "The question of professional instruction in the engineering schools is entangled with the problem of leading the students through a course of preparatory science, looking towards the professional studies . . . but we hope that some inviting plan may yet result from the proposals made by several great university presidents in respect to co-ordinating the liberal and professional courses. We would . . . gladly receive and encourage all students who have been able and willing to complete an academic college course before entering upon their technological studies."

Relative to this most timely educational utterance, we can now add that if youth, influenced in some things, and not inexcusably, more by outward appearances than by properly decisive principles, is naturally elated by translation from a secondary to a polytechnic school, he may thence unadvisedly underestimate his position as being no more than that of a "college boy," and so act on the adage, "boys will be boys." This unfortunate error, both for himself and the school, suggests the advantage to all concerned of a more marked separation between the properly collegiate and the really professional grades in polytechnic school courses than we have thus far noted as virtually, though not yet formally existing hitherto, so far as we know. Such a separation would not be difficult to make by either of two methods. First, and probably the best one, since polytechnic schools best know their own wants, let them, as a beginning, in order to avoid too sudden and great changes, reorganize by extending their present four year courses to five years, and then sub-divide them into two successive parts,—one an appropriate general science, language, and literature course of three years, to be followed by an elevated and strictly professional course of two years, which, to meet growing wants, might come to be one of three or four years.

Otherwise, and by due co-ordination principally with the science and modern language courses of existing colleges, brought about through ample mutual conference, the polytechnic schools,

beginning at first, perhaps, with a two years purely professional course, might admit to it the general science and literature college graduates, and hopefully graduate them in their twenty-third or twenty-fourth year; which is not far from what is done under perhaps the best of now existing conditions.

As a sample of what may be reasonably expected from the happy co-ordination here advocated, and judging from a list of more than five hundred graduates under conditions as nearly approaching it as now exist, we will add that while seven years after graduation has been thought by some to be a fair period in which to test by experience what the graduate can be and do, the list here reported consists of graduates of the twenty years next preceding those of the last five years. While all of the five hundred apparently occupied useful and honorable positions, and while the number of more distinguished positions may have been underestimated from their briefly recorded descriptions, it is at least true that no less than twenty were professors or assistants in technical schools; twenty-one were superintendents; twenty-three were managers; sixty, or more, were chief engineers, or department heads, or members of established engineering firms; and forty-two were presidents or vice presidents of large establishments of numerous kinds.

Now, in conclusion, and above and beyond all yet here written, regard for complete truth compels the honest thinker to add that the question before us is inseparably connected with that of the quality and kind of ethical and spiritual influence that should be the pervading atmosphere of schools of every grade; and pre-eminently, in behalf of those succeeding them, in secondary schools, as being those in which life is in its most impressible, and hence most formative, stage.

Prevention is better than cure, as timely precautionary experiment is better than perhaps disastrous experience. Hence, one can only hail with delight the fact, communicated by a valued correspondent, that some of the best secondary schools are endeavoring to upbuild and enrich the last year of their courses by special training in such high and comely ideals of virtue, honor, and worthy self-respect—in one word, of character—as shall extinguish in advance the unseemly puerilities, not

to say imbecilities, belonging, as watchful, yet kindly humorous, students of life have said, to the veal stage of existence. While such things have too often blemished school life, even in the college stage, and with no better excuse than that "boys will be boys," the main point is that there are boys and there are boys, and out of what kind of boys can we make the men that the country is wanting and is waiting for?

Fresh from being shown by a friend over an immense establishment where such work is undertaken as calls for the completest technical knowledge and practical skill, the thought, otherwise and always obvious on reflection, is strongly reinforced, viz., that, great as is the ability required by these exacting works, life falls far short of its loftiest ideals without the added spiritual touch. This it needs, if only as a natural counterweight to the otherwise intensely materialistic associations—though not necessarily materialistic effects—of polytechnic school studies, however magnificent these may otherwise be to thoughtful minds.

Accordingly, echoing through the vista of the ages all along, comes the voice saying, "God is a spirit; there is a spirit in man," as an ennobling, personal reminder never to forget who is studying, and who and whose he is, as well as what is studied and for what ends. A responsive voice then reinforces the former with the appealing word, "The merciful and gracious Lord hath so done his marvelous works that they ought to be had in remembrance"; words worthy to overarch the entrance of the grandest school or museum of science as another echoing reminder of the Divine Author, both of the wonderful and fascinating works to be fruitfully studied and of the marvelous faculties that may immortally delight in both devoutly and beneficently studying those works.

Wherefore, knowing well that there must be appropriate daily food both for body and mind that both may healthfully grow, why not also in every polytechnic school welcome as its crowning and its happiest element a daily free devotional service of timely Scripture, of full-voiced song with organ grand, and uplifting prayer with fatherly word of ripe counsel out of rich experience, and all as life-sustaining and ennobling daily food for the spirit?

*Editorial*

IT has been felt for some time that the colleges are unwise in their entrance requirements from the standpoint of quantity. This can be cited as a fault in almost all subjects with the probable exception of mathematics. It is especially true of the English requirements, and it is time that school authorities protested. Why should not the opinion of those who fully realize the capabilities of the average high school pupil have due weight in determining the amount of work demanded? Surely the average college instructor or professor does not have sufficient knowledge of the conditions prevailing in the many preparatory schools,—teaching force, equipment; nor can he have the intimate knowledge of the pupil of high school age which would determine beyond all question that a preparation cannot be secured equivalent to that which only students with mature minds can master. This is what is demanded, and it only requires a glance at the outlines of English inserted in any college catalogue to convince the average educator that the quantity is largely in excess of what the pupil is able to do, and to do successfully. Surely the time is at hand when quality should be the determining factor. Take English, for instance. In what school is it possible for the average boy or girl to appreciatively understand and to show that he is acquainted with all of the following: Merchant of Venice, Julius Cæsar, Sir Roger de Coverley Papers, Vicar of Wakefield, Ancient Mariner, Ivanhoe, Carlyle's Essay on Burns, The Princess, The Vision of Sir Launfal, Silas Marner; or to thoroughly understand form and structure of subject matter of the following: Macbeth, Milton's L'Allegro, Il Penseroso, Comus and Lycidas, Burke's Conciliation with America, and Macaulay's Essays on Milton and Addison? What pupil can be expected to master these works as required, and get that love for literature which the study of the above ought to give? In order to meet the requirements a hurried reading is necessary, a slashing of contents is practiced, a distorted knowledge is obtained, and the student is as likely to give quotations from Milton as from Shakespeare and not know the difference, or to give the characteristics of Milton for that of Carlyle. The appreciation or love for good English is thwarted, and in its place comes a confused idea of the real import and value of the authors studied. Scarcely one of the many pupils ever pursues further the

reading of any of the authors mentioned, but the real outcome is a listaste for good English. More often it results in driving the student to read only the light and frivolous literature which floods the book stores, and in many cases reading is stopped altogether. A much better method would be to confine the schools to a few—a very few—selections, and let these be read carefully and entire before any comments are made. Then give an opportunity for absorption, allow the pupil to take in the setting, the purport of the selection, the life of the author, etc. Study the play in parts, comparing one part or passage with another,—in short, give an opportunity for what he reads and studies to become a part of him. What we want is a class of pupils who will appreciate good English, and know how to use it. Let us have the opportunity to drill the pupils in the knowledge and use of English. It is the power to use the English language, to understand construction of sentences, to appreciate errors, to love literature, to see the beauty of form and outline, and that to further pursue its study will open to pupils avenues and worlds of which they have not yet dreamed. This cannot be done unless quantity gives way to quality. We cannot do this too soon in order to save our pupils from overdoses which from their very nature cannot be assimilated.

**T**HE recent movement in North Carolina to provide and encourage the establishment of libraries in the rural schools is deservedly attracting the attention of school people outside of the state. The General Assembly about two years ago provided, briefly :—

“That whenever the friends or patrons of any rural public school shall contribute ten dollars or more for starting a library in connection with the school, ten dollars of the district school fund shall also be set apart for the same purpose, while another ten dollars will be given from the state appropriation.”

This provision is in every way commendable. Next to the family it puts the books where they are most needed, not at some point in the neighborhood for general use, that often proves to be no use, but in the school. It is not enough that the state teach children to read; they must, in order to come to an interested, alert citizenship, be given a reading habit,—a habit of going to books and current literature for information and inspiration and pleasure. Under this law almost one thousand school libraries have already been established in the state, and the state fund is being used as rapidly as it is available. In a few counties every white school has a library. The old north state is to be congratulated.



ANY close observation of the inner work of the schools emphasizes the importance of teachers having in mind, clearly, the distinction between education as such and mere training. Both have their uses; neither should be neglected. The former implies intelligent foresight; the power to conceive and picture distant ends to be attained, and the use of suitable means to accomplish these ends; the forming and holding of ideals in science and art and conduct; the power of purposeful, consecutive thinking. Along with these functions man shares with the lower animals others also, that lend themselves to the taking on of fixed ways of acting; repeating unthinkingly the original act; crystallizing in set ways the tendency of the mind to act as it has acted. In appealing to the mind's initiative, on the other hand, there is a recognition of its power, its tendency, to think the experience in a new way; as sustaining manifold relations other than those in the original act, and so, using it in a new form, perhaps with new meanings.

The former is training; the latter is education. That gives resourcefulness, and leads to multiform experience and growth; this to uniformity of action and a fixed order. The one equips the individual for following a familiar, conventional and prescribed order, the other for intelligently meeting even unfamiliar conditions.

Much of the work of the school is of the character of training; acquiring a knowledge of the symbols of experience, acquaintance with the conventional forms of social and business intercourse, language, the bodily movements, etc. There is no occasion to belittle the value of these acquirements; there would be little education without this function, also, of the mind. But this is not education. It is a tool, a means, but not a force for progress. Its primary function is to mechanize, to enslave; not to liberate. Freedom comes through education; all advance in civilization and achievement. That gives skill in manufacture and administration; facility and grace in conduct and intercourse; perfection of form and finish: this stimulates reflection, ingenuity, the free play of ideals and the creative faculties. Training looks to specific ends; education to versatility. Education seeks to make men; training, workmen. The steps in training are generally simple and easily acquired; those of education often intricate and elusive. By training men become experts in doing; by education they are fitted to improve their doing. Each is the complement of the other. A high state of either stimulates to a development of the other. The highest education in the race is of little value unless there be skill to apply it to the arts and purposes of life; the most perfect skill is lame if it have not intelligent direction.

Education is the rational process of growth that makes the masterful possession of all needful knowledge and skill certain.

### *Foreign Notes*

#### WOMEN IN SCHOOL ADMINISTRATION.

In France complaint is made that although the financial law of July 19, 1889, declares that women should be admitted to the service of inspection on the same conditions as men,—that is, on condition of obtaining the required diploma, and of having fulfilled successfully the duties of some subordinate position,—nevertheless only two or three women have received appointments. A movement has been started for the creation of definite positions for inspectresses in every department (division equivalent to a county) of the country.

The excitement in England over the endeavor to strengthen church schools at public expense has obscured all other retrogressive features of the recent education laws, *i. e.*, the law of 1902, and the law for London just passed. The effect of the laws in diminishing the responsibility and the influence of women in respect to the conduct of school affairs is, however, attracting more and more attention. Women were eligible for election to the old school boards, and in all the large cities they have given most efficient service in this relation, and have won unstinted praise. As women are not allowed on the county councils, they will no longer have an authoritative voice in school administration excepting in a few of the most populous urban districts. The law provides that women shall be appointed on the education committees formed by the councils, which committees have no "power of the purse" and no appeal to the voters. It is noticeable, also, that a great number of the schemes which have been drawn up for the formation of these committees provide for the inclusion of but one woman. This arbitrary exclusion of persons eminently fitted to bear a part in the work of school administration on the mere ground of sex is a wrong to the people, and particularly to be regretted for its effect upon teachers and pupils. The Woman's Local Government Society has taken up this matter in dead earnest, and is waging a campaign of education which is sure to tell when the law is amended, as it is now quite evident will be the case in the near future.

#### PROGRESS OF ELEMENTARY OR POPULAR EDUCATION IN ITALY.

The great activity in educational matters which has been manifest in Italy during the past decade is yielding practical results even in the

sphere of elementary education. This interest, as it affects only the common people, has always been more backward than middle class and higher education. The number of infant schools has noticeably increased in recent years, and a marked improvement has taken place in their management. They are becoming more and more centers of natural life and free development, with a gradual diminution of tasks which early inure children to the grind of laborious poverty. In order to secure the largest attendance in these schools a "patronage association" has been formed which supplies books, pencils, articles of clothing, and food to the poorest children. The enrolment in the infant schools has reached about three hundred and fifty thousand, which is a little less than half the enrolment in the infant schools of France. The ratio of this enrolment to population is one per cent for Italy as against 1.7 per cent for France.

The most significant sign of activity in respect to popular education is the improvement in the housing and equipment of primary schools which is gradually taking place, and in the enrolment of children in these schools. In the three years 1895-96 to 1898-99 the registers showed an increase from 2,379,349 pupils to 2,444,288, or a gain of 68,839 pupils in three years. The ratio of enrolment to population is still low; viz., 7.5 per cent, but the increase seems to be continuous. The ratio of illiteracy, which stood at 73 per cent in 1871, had declined to 43 per cent in 1899. The number of normal schools increased from 115 in 1871, with an enrolment of 6,130 students, to 150 in 1899, with an enrolment of 21,488 students. This increase has been entirely in schools for women, as the number of normal schools for men has been steadily diminishing. The relative proportion of men and women students in 1871 was 27 per cent of men to 73 per cent of women, against 7 per cent of men and 93 per cent of women in 1899. It is now generally conceded that women are much better adapted than men to impart the very elementary instruction of the primary school, and to supplement their teachings by the sort of personal influence which awakens and fortifies the moral perceptions of children.

In the period from 1873 to 1899 the expenditure for public primary schools, including infant schools, rose from 29,039,381 lire (\$5,604,600) to 74,398,629 lire (\$14,358,935). Of this latter total the general government contributed 10 per cent, the communes 89 per cent, and the provinces the small balance.

## UNIVERSITY NOTES.

The latest official statistics of higher education in Italy show a total registration in universities and higher technical institutes of 26,401 students in 1902. The corresponding registration in 1893 was 21,870; the highest registration for the decade was reached in 1901, viz., 27,388. The number of students in 1893 was equivalent to 7 for every 10,000 of the population, and in 1902 to 8 in every 10,000. It appears further that while the population increased during the decade by 6.4 per cent, the number of university students increased by 20.7 per cent.

The official statistics of universities and higher technical schools in Spain for 1900-01 show a total registration of 14,618 students, which gives very nearly the same ratio to the population as was found for Italy; viz., 8 students for every 10,000 of the population. It should be observed that these totals include many students of secondary grade who are not counted as matriculates in the registers.

Interest in university education everywhere, it may be said, follows the Spanish flag. This has been noticed in our own recently acquired possessions,—Porto Rico and the Philippines,—and is equally marked in the Spanish-speaking countries of South America. The 4,070 students in higher education reported from South America in 1900 were distributed as follows: Buenos Ayres, 2,665; Santiago, 2,000; Montevideo, 132; Institute of Pedagogy, Santiago, 141; medical school, Montevideo, 132. In all the Spanish-speaking countries popular education is in a backward state. In Spain itself the enrolment in the elementary schools is only 7.4 per cent of the population. In Bolivia it is as low as 2 per cent; in Chile, 4.2 per cent; in Uruguay, 5.6, and in Argentina, 7.4.

The Prussian government appropriated for public education in 1902 a total of 158,875,087 marks (\$39,717,521). Of this amount 14,625,379 marks (\$2,925,076), or 9 per cent of the total, went to universities.

In his address before the British Association Sir Norman Lockyer created a profound impression by his contrasts between the lavish expenditure on higher education in the United States and the niggardly expenditure for the same interest in Great Britain. His comparison reduced to the lowest terms stands \$200,000,000 in the United States against \$20,000,000 in Great Britain expended on higher education during the last few years.

The growing importance of geographical education is indicated by

the prominence given to the subject in the proceedings of the British Association, and by the report of the general board of studies of Cambridge University proposing a "more comprehensive organization of geographical studies and examinations in the university." The University of Liège, Belgium, comprises an institute of electricity, which is one of the most perfectly equipped in Europe.

Ten students under the will of Cecil Rhodes are now at Oxford; namely, five from Germany and five from South Africa. Of the latter group all are to read for the A.B. degree, but it is reported that their tutors find difficulty in bringing them up to the standard of the matriculation examination, *i. e.*, "Responsions." The idea that has gained credence in some quarters that these scholarships will be used to enable students to pursue research work is discredited in England. It is, indeed, distinctly asserted that the trustees of the fund would regard such use of it as a violation of Mr. Rhodes' intentions.

A. T. S.



## *Book Notices*

NOTE.—The number of books now published monthly is so large that we shall hereafter adopt the plan of promptly acknowledging by title, author, publisher and price, all books sent us for review; and later, as space is available, give more extended notice to such as seem most likely to be of interest and value to our readers.—PUBLISHERS EDUCATION.

**A General History of Commerce.** By William Clarence Webster, Ph.D. Ginn & Company, Boston, 1903. Pp. ix-526. Dr. Webster has succeeded in producing a splendid book on a topic which just now is attracting the attention more than any other of the secondary schools. It is, in fact, a broad introduction to the special commercial studies which are being offered in the business colleges and commercial high schools.

The author devotes 34 pages to ancient commerce, 72 pages to mediæval commerce, 104 pages to early modern commerce, 177 pages to commerce during the age of steam, and 227 pages to commerce during the age of electricity. In space he has thus preserved a proper perspective while treating the subject in its entirety. The good judgment shown in properly proportioning the sections extends to the selection of the subject matter, and as for the style in which it is delivered by the author it is noteworthy in text-book literature. It is very seldom that one finds in even the carefully prepared modern text-books the style that one expects to see in general literary books, but Dr. Webster has given us an example of what can be done. The full flow of thought that attracts and holds the attention of the reader of the book is so well preserved that one almost feels as if he had heard the author deliver his lecture in person.

The general method of treatment adopted by the author is philosophically historical, and the reasons for the condition of trade during the various periods are carefully interwoven with the facts. In this process not only are the political conditions as affecting trade presented, but as well the conditions of life that give rise to the necessity for the exchange of products.

The author has given due space to the commercial conditions pertaining to all the important commercial powers of the present time, and thus the most general relations are pointed out. There is not, however, an attempt to give the details that must be embodied in a book on existing commercial conditions whether it be in the form of commercial geography or of economic resources.

One important feature of Dr. Webster's book is the fact of the permanent value of so much of the text, it being only the latter portion that will have to be added to from time to time to keep up with the current conditions. The references at the close of each chapter are not only important as showing the author's sources, but they will serve as a guide to collateral reading for mature students and teachers, and for thesis work on the part of the pupils.

To American students perhaps the most important chapter is the one on "The United States Since the Civil War," which covers what may be termed the new era in the industrial and commercial history of the country. The enforced commercial rest during the war was succeeded by a feverish activity, and many new business features were introduced by the necessities that arose as a consequence of the war. During this period from 1865 to 1900 the United States arose from the condition of producing merely for home consumption to being the foremost

producing country of the world. The increase in wealth, the building of trans-continental railroads, the regulation of interstate commerce, the development of telegraphic and telephonic communication, the Isthmian canal projects, the growth of population and immigration, colonization, commercial reciprocity and unification of American interests, the tariff policy, the financial panics, the international exposition, labor organizations, legislative governing trusts, industrial commission of 1898, the establishment of the department of commerce, commercial education in the United States, New York City's commercial and financial status, development of the agricultural, forestry, mining, fishing, and manufacturing industries of the United States, comparison of the industrial progress of the United States with that of Great Britain and Germany, the industrial progress in the South, the growth of foreign trade, comparison of exports and imports, development of our domestic commerce, American shipping, a summary of the commercial advantages enjoyed by the United States,—each of these topics is treated briefly though very broadly, and in addition to the measurement, numerical where possible, of the development, the vital point as to its cause is clearly set forth. It is doubtful if any other writer has produced such a well-balanced, succinct account of the recent commercial development of the United States; and it is particularly fortunate that it appears in a text-book, which is sure to have a wide use in our public and private schools where commercial subjects are taught.

The student or business man who reads this book through with careful thoughtfulness cannot help obtaining a grasp on the whole subject of commerce that will enable him to understand how the present conditions have come about, and to note their tendencies.

**My Own Story ; with Recollections of Noted Persons.** By John Townsend Trowbridge. This is a thoroughly interesting, elevating and instructive book—one of the best biographies we have ever read. Mr. Trowbridge's long life has covered the period of many of the most important and dramatic events in the life of our country. His experience has been very varied and he has always wielded "the pen of a ready writer." As correspondent, story-writer, novelist, poet, and contributor to leading periodicals, he has had a rich, full and influential literary career, and endeared himself especially to the young people of two or three generations. He is a self-made man, and the account in this volume of the primitive conditions of his boyhood days and of the adventures of his early manhood is more interesting than a novel. He began to write verses at thirteen. He left home at seventeen. At nineteen he was writing for the press in New York City. Later he went to Boston, where he was employed on *The Yankee Nation*, *The Atlantic Monthly* and other periodicals, and wrote several books. He made an extensive tour in the South after the war and wrote a book of five hundred and ninety pages, entitled "The South: Its Battlefields, Desolated States and Ruined Cities, Its People and Prospects." He was the author of "Cudjo's Cave," and other war stories that had their share in shaping public sentiment and action in the great struggle of the Civil War. He knew the principal authors, poets, and statesmen, as well as generals, business men and foreign celebrities who have been the chief actors in the drama of our national life in the past seventy-five years. It is an education to read his reminiscences. It is broadening and gives one new aspirations. The style is that of a master and

there is a frankness, pureness and simplicity about his narrative that is altogether charming. The book is handsomely made, with a number of illustrations, and is published at \$2.50 by Messrs. Houghton, Mifflin & Co. Whoever buys and reads it will consider the money well spent.

**The Jones Readers.** Nos. I-V. For corresponding grades. By L. H. Jones, A.M., President Michigan State Normal College. President Jones has had a wide experience in the public schools, having been superintendent at Indianapolis, Ind., and at Cleveland, O. He has long been favorably known as one of the most scholarly and discerning of our greater superintendents. His series of readers are carefully graded to the comprehension of children of different grades. The subject-matter has been selected for its value as literature. There is nothing but good English to be found in these five splendid readers. It has been selected with marvelous discernment and sympathy with the child. The first book deals with the birds, animals, insects and other things in nature which the little child first notices, and in which he is especially interested. Simple sentences lead out his thought upon these subjects, which are also presented in artistic illustrations. He will find every page intensely interesting, and the study of his book will develop in him a love for nature, and he will learn to read from the interest of the thing. The selections are gradually extended to more and more complicated experiences of human thought until in the fifth book of the series we have some of the great classics of English literature, and the student is familiarized with such writers as Longfellow, Bryant, Burroughs, Carlyle, Froude, Victor Hugo, Scott, Tennyson, etc. We know of no series of books along this line which is more complete, artistic, and generally satisfactory from the standpoint of both teacher and pupil. Ginn & Co.

**Special Method in History.** By Chas. A. McMurry, Ph.D. This book gives a complete outline of a course of study in history for the schools below the high school. It gives an excellent idea of what may be properly aimed at in the way of historical study in each grade. As an aid to the teacher, if nothing more, the book will be exceedingly useful. Any student of history, whether a child in the public schools or an adult seeking to take up a systematic course of historical reading, would find it a most helpful guide. The Macmillan Company. Price, 75 cents.

In the series of geographical readers known as "The World and its People," Volume XII is **Porto Rico, the Land of the Rich Port.** By Joseph B. Seabury. This admirable series of supplementary readers has achieved a high reputation. Into the present volume is packed a large amount of information in regard to this one of the most interesting of our new possessions. It is fully illustrated with scenes from the lives of the Porto Ricans. Silver, Burdett & Co.

**Ways of the Six-Footed.** By Anna Botsford Comstock, B.S. This volume contains ten interesting stories of insects. The author has already achieved a reputation as an interpreter of nature, and her present book is an admirable contribution to the material of nature study, which is so popular at the present time. Most of the stories have been published in different periodicals heretofore; but they have been revised and brought together into an attractive little volume where each helps the others to make a profound impression upon the mind of the young reader. The book is prettily illustrated and bound. Ginn & Co. Price, 40 cents.



**The Progressive Arithmetic.** By W. F. Nichols. Parts I, II and III. There are many teachers who prefer a graded series of arithmetic lessons. These lessons begin with the simpler propositions, dealing with things with which the pupils are familiar. The expressions are concrete rather than abstract. The pupil is expected to measure distances, weight, substances, etc., and learn in a practical manner about forms, areas and lines. There are a large number of oral examples. The subject of percentages is practically treated in its application to methods of computing interest and to the subjects of banking and commerce and kindred topics, and many short cuts used in practical business are fully explained. The books are handsomely printed and bound, and are meeting with a cordial reception from the teaching world. Boston: Thompson, Brown & Co. Price, Part I, 35 cents; Part II, 45 cents; Part III, 55 cents.

**Insect Folk.** By Margaret Warner Morley. The author of this book is well known by her former volumes "Seed Babies," "Flowers and Their Friends," "Little Wanderers," etc. She writes for little people, and teaches them the A B C of science. She sends her little students to nature; not to torture the little creatures studied, but to watch them. She teaches them how they may find and carefully observe the little lives that are all around them in the world, and so she opens their eyes to the beauty and fascination of nature study. The book is helpfully illustrated. Ginn & Co.

**The Nature Study Idea.** By Prof. L. H. Bailey. This is a condensed but comprehensive account of "the new school movement to put the child in sympathy with nature." The first part considers what nature study is; part second gives an interpretation of nature; part three treats of some practical inquiries and ways of answering them. It is a book for teachers, and gives an up-to-date statement of what has been accomplished along this line and an idea of what should be made of it by those who are taking up nature studies in schools. New York: Doubleday, Page & Co. Price, \$1.

**Geographical Influences in American History.** By Albert P. Brightman. No thoughtful person can doubt that the physical conditions in any nation have a profound influence on that nation. The United States is between two great oceans. This involves a mighty commerce. Its mountains are built of granite, iron, silver, gold, etc. Its Niagara Falls are sources of tremendous power. These, and multitudes of other influences, have conspired to make us great. The present volume is a study of these influences. The arrangement is mainly geographical. Among the themes treated are The Eastern Gateway of the United States, The Appalachian Barrier, The Great Lakes and American Commerce, The Civil War, Mines and Mountain Life. The book makes geography intensely interesting, and it is full of material which will be of use to the general reader. Boston: Ginn & Co. Mailing price, \$1.40.

**Wagner's Parsifal.** As retold by Oliver Huckel. With five illustrations by Franz Stassen. This is a work of love by an intelligent, cultivated American music-lover. Never before has Wagner's great drama been put before English readers in a worthy translation. We find this poetical version of Mr. Huckel's noble and satisfying. It is the work of a sympathetic and poetic

spirit who has several times at Bayreuth given himself up to the inspirations and exaltations of the drama as interpreted in the marvelous music of that great festival. The story has profound moral and religious bearings. Students of Tennyson and admirers of Abbey's famous paintings of the Holy Grail legend on the walls of the Boston Public Library will enjoy the book and find it helpful. The author defines his purpose as "to give an interpretation, a cumulative impression, the spirit of the words, music and mystic meaning blended together into one story and picture." Two or three readings will be helpful in enabling the reader to fully catch the spirit of the poem and appreciate the true inspiration of its author. It is a delicate piece of work well and finely done. T. Y. Crowell & Co. Price, 75 cents.

**Composition and Rhetoric.** By Rose M. Kavana and Arthur Beatty. This work departs smartly from the well-worn paths so faithfully followed by writers of rhetoric text-books. It is primarily a book of technique which aims at stimulating an interest in good workmanship; it applies to the study of composition the studio method familiar to students of other arts. A strikingly distinctive feature is its plan for correlating literature, rhetoric, and composition by deriving from particular masterpieces a number of typical forms for various kinds of themes; in this way literature is made to furnish not only the subject matter but the form of some of the student's themes. Thus it is hoped to secure in the study of rhetoric and composition a breadth of treatment otherwise impossible, and to keep the study from becoming a matter of abstract science on the one hand or mere mechanical detail on the other. The student is led at once into near sympathy with the best models in literature, and is skillfully directed toward creative work of a kind that is not imitative, but rather individual and original. The wealth of exercises and models assures the student a full survey of what is best among writers, and makes him a critic not only of his own productions but those of others. Theme-models abound, and on them are to be constructed compositions on all of the various kinds of writing. The book is intended for high schools and academies, and its use will go far to introduce students to the best literature and enable them the better to appreciate it with a reason for their appreciation. Eighteen full-page plates, masterpieces, embellish the work and serve for study exercises. Rand, McNally & Co.

**General Zoology,** by Charles Wright Dodge, Professor of Biology in the University of Rochester, is a revision and re-arrangement of "Orton's Comparative Zoology," long a standard text-book in the schools. In the revision, Dr. Dodge has brought the facts of latest discovery into practical use, and has made such changes in Orton's work as to make what is practically a new book, thoroughly scientific and entirely adequate for the student's needs to-day. The pedagogical importance of laboratory and field study has led to the introduction in the book of a series of exercises upon the structure, physiology, and habits of representative animals. The student is thus set to individual investigation and research; he becomes an original worker rather than a mere book learner of facts discovered and set forth by another. The book is now thoroughly interesting, eminently practical, strikingly accurate. American Book Company.

**Primary Arithmetic.** By William J. Milne. This little book is designed to provide a thorough and rational course in what is termed primary arithmetic. It covers the first three years of the pupil's attendance in school, and takes him at the very beginning of his career and advances him by sure steps until he is ready to take up pencil work in the more advanced work in the author's Elementary Arithmetic. It is a satisfactory text-book, along safe lines and tried, and the student is safely grounded in the rudiments of numbers when he has completed the book. American Book Company.

**How We Are Fed,** by James Franklin Chamberlain, is a geographical reader of surprising interest and importance. There are taken up in a most graphic manner little studies of the industries that supply the home life of all, as how our meat is supplied, market gardening, dairy products, butter making, cheese, fishing, oyster farming, sugar, salt, macaroni, coffee, cocoa, cranberries, nuts, dates, etc. The industries connected with these are set forth in simple language, and the young readers will the better understand how our tables are supplied, our bodies fed, our lives made stronger. There is nothing in the stories that smacks of the encyclopedia; the information is all new and fresh, and vivid with life and interest. It is a capital book to use as a supplement to the geography lesson. The Macmillan Company.

**Stories from the Hebrew.** By Josephine Woodbury Heermans. These stories are rewritten from the Old Testament records and tell of courage, fidelity and truth. They make substantial and informing reading for schools and serve to introduce young readers to the historical stories with which the Old Testament abounds. The stories are simple in style, lofty in tone and pure in character. Silver, Burdett & Co.

**The Indians of the Painted Desert.** By George Wharton James. For all children, whether old or young, there is a fascination about Indians and Indian stories. We have all felt this in our childhood, and there are few adults who have gotten away from the impressions made upon them in their youth by the Indian stories which they read. Mr. James has brought before us in a vivid way by use of word-pictures and choice photographic illustrations the life of a wild people. The Spaniards years ago came to the borders of the region north of Mexico inhabited by a people who gave themselves the name "Hopituh," which is said to mean "The Wise People." The Spaniards named the region inhabited by these aboriginal people "El Pintado Desierto." It is truly a painted desert. The author of this book has been familiar with its wonders and its horrors for upwards of twenty years, and he here describes the country and its people. The book is a veritable wonder book, and the beauty of it is, it is all fact, not fiction. It sheds much light upon a region as primitive and heretofore practically unknown as the heart of the African forest. It is written in a charming style, and the illustrations faithfully reproduce the photographs taken by the author in the scenes which he describes. Little, Brown & Co. Price, \$2 net.

An excellent gift book for Christmas is **The Christ Story**, by Eva March Tappan. Miss Tappan has a high reputation as a writer for children. She tells the story of the Saviour in a simple and dignified way, making it a real story

which will interest the young reader and familiarize him with the facts related in the Gospels. She weaves in, incidentally, accurate descriptions of the country; its manners, customs, ways, speech, etc. The book is very prettily illustrated with exceptionally fine full-page illustrations of the masterpieces of the great classic and modern artists. It is a book of permanent value and usefulness. Houghton, Mifflin & Co. Price, \$1.50 net.

**Best Tales of Edgar Allan Poe.** Edited with introductory studies by Sherman Cody. Mr. Cody is well known as a Poe editor. The present volume is a well-selected series of Poe's most famous stories. It is bound in a convenient "handy volume," with good-sized type and portrait of the author. The general reader, as well as the student of English literature, will find this a pleasant, helpful volume. A. C. McClurg & Co. Price, \$1 net.

We have received the following books for review in EDUCATION:—

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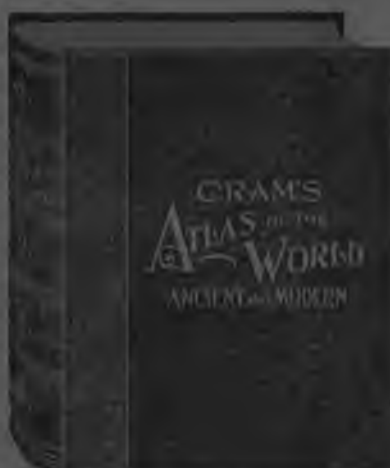
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## CONTENTS

|                                                                           |     |
|---------------------------------------------------------------------------|-----|
| University Training and the Doctoral Degree. <i>Robert MacDougall</i>     | 361 |
| Some Thoughts on College Entrance Requirements. <i>Ernest Ramaley</i>     | 377 |
| Silence and Serenity. (Poem.) <i>Elizabeth Porter Gould</i>               | 380 |
| What is Multiplication? <i>A. Latham Baker, Ph.D.</i>                     | 381 |
| In the Piazza San Marco. (Poem.) <i>Isabel Hunter</i>                     | 384 |
| The Relation of Drawing to Other Subjects. <i>Hermann Warner Williams</i> | 385 |
| Education at the St. Louis Exposition. <i>George F. Gay</i>               | 398 |
| Outline Study of Elias Marnet. <i>Maud E. Kingsley</i>                    | 391 |
| Individual Work in Composition Writing. <i>Margaret Allen</i>             | 396 |
| Editorial                                                                 | 399 |
| Foreign Notes                                                             | 313 |
| Book Notices                                                              | 316 |
| Periodical Notes                                                          | 324 |

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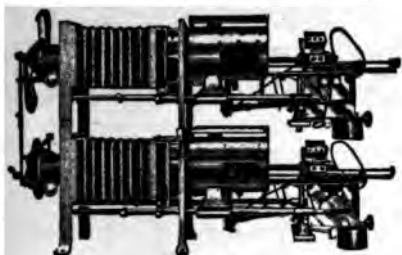
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## *Publishers' Bulletin Board.*



Announcements of the Cornell Summer Session for 1904 are at hand. We note that the Nature Work, supported for two years at State expense and then discontinued, has been made part of the regular program under Professor L. H. Bailey, the new head of the department of Agriculture.

Mr. Herbert S. Kellogg, for fourteen years Manager of the Teachers' Bureau, desires to announce that he has secured a handsome office in the new fire-proof Metropolis Bank Building at 31 Union Square (Broadway and 16th Street), New York City, where he will be glad to receive his patrons after January 1st, 1904.

On Saturday, November 28th, about 300 teachers met in the Milbank Memorial Hall, Teachers' College, New York City, and organized an Association of Teachers of Mathematics in the Middle States and Maryland. Almost all the colleges and larger schools within the territory named were represented, and considerably more than 200 persons enrolled as foundation members of the society, whose prime object is the improvement of mathematical teaching. Professor David Eugene Smith, of the Teachers' College, was elected President of the Association; Professor H. B. Fine, of Princeton University, Vice President; and Dr. Arthur Schultze, of the High School of Commerce, New York City, Secretary.

In Education for February, Principal Ezra M. Sparlin, Rochester, N. Y., will consider the important subject of "The Program in Elementary Schools"; Supervising Principal F. H. Hain, Cape May City, N. J., will present an able paper on "Physical Education"; Mr. John T. Prince, of the Massachusetts State Board of Education, will write of "Defective Children and the Public Schools"; a literary sketch of great interest entitled, "Around London with Dickens, will be contributed by Caroline Sheldon, Mills College, California; the venerable John Ogder Minneapolis, Minn., will begin a series of three or four papers on "Lessons in Genetic Psychology and its Relations to Pedagogy"; Mr. John J. Tracy, of La Salle Academy, Providence, R. I. will speak of "Herbert Spencer's Essays on Education"; and Mr. Alfred M. Hitchcock, of the Department of English, High School, Hartford, Conn., will discuss the topic "Economy in Teaching Composition." Editorially we shall inquire concerning the relative importance of the common, old-fashioned studies and the numerous later additions to the subjects taken up in the public school curriculum.

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Messrs. Ginn & Company issue a monthly "Text-Book Bulletin" which announces new and forthcoming books. Prof. George Lyman Kittredge, of Harvard University, contributes a leading article to the November number. The illustrations which illuminate his "Some Landmarks in the History of Latin Grammars" are taken from very rare books and are both valuable and interesting.

The great popularity of "The Journal of Geography" now published at 160 Adams Street, Chicago, Ill. (to which address send for sample copy), induces us to make a special clubbing offer to new or old subscribers to either magazine. Send us \$3.75, and we will furnish *EDUCATION* and *The Journal of Geography* for one year.

About one hundred teachers met at the Girls' Latin School, Boston, on December 12th, and, after discussing the need and scope of such a body, organized the New England Modern Language Association. This new educational body is intended to cover New England modern language interests entirely distinct from the American Modern Language Association. It intends to make its work very practical and to direct its efforts along lines which are somewhat novel in teachers' associations. The teachers who will compose the new association include those of colleges and secondary schools alike; an advantage which many speakers from the ranks of each, thought very important to its usefulness.

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Miss Elizabeth Porter Gould, who has for years been a frequent contributor to **EDUCATION**, brought us early in the summer a MS. of an historical study which she had made, of the experience of "John Adams and Daniel Webster as Schoolmasters." Her work seemed to us to have a permanent value, and we decided to issue it in book form. It is an excellent illustration of what can be done in the way of specialized and local historical study and investigation. Hon. Charles Francis Adams wrote for it an interesting introduction. It has already met with a cordial reception by the public, and commendatory letters have been received from many distinguished persons, among the number ex-President Cleveland. We are sure that a large number of public libraries throughout the country will wish to include this little book in their lists this autumn.

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EDITED BY

CHARLES DE KAY

DIRECTOR OF THE NATIONAL ARTS CLUB  
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# EDUCATION

*Devoted to the Science, Art, Philosophy and Literature  
of Education*

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## *University Training and the Doctoral Degree<sup>1</sup>*

ROBERT MACDOUGALL, NEW YORK UNIVERSITY, NEW YORK



HE problem of the functional relations of our various institutions of higher learning is presented in many forms. The college has been eager to add research apparatus and methods to its equipment; the university finds itself halting between the enforcement of a high and proper standard of matriculation and the admission of courses adapted to insufficiently prepared students; the professional school is not content to give only a practical training in its special branch, but seeks also to offer as full an opportunity as possible for the study of those pure sciences to which the practice of the student's craft is most intimately related.

The differentiation of these various classes of work, which does not depend upon the nature of the educational material but is a question of the method and point of view under which it is treated, is forced upon our attention only when it affects the problem of organization. It is this which has made the dis-

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<sup>1</sup> Phi Beta Kappa address, read before the New York University Chapter, June 3, 1903.

crimination of their functions important to-day. For the purposes of practical economy and success in the ordering of our educational program, what is the best distribution we can make of cultural, scientific and technological studies? What office shall the high school, the college, the university and the professional school fulfill, and how shall these be made most adaptable to the individual and still ensure a liberal education? These are the fundamental considerations which underlie the many proposed changes which are discussed to-day, proposals to extend high school training, to raise the standard of collegiate matriculation, to shorten its curriculum, to combine collegiate with professional instruction, to increase the period of professional study, to differentiate institutions into types specifically collegiate and university.

Among the many aspects which these problems present I have selected the last mentioned, and wish to pass in review the characteristics which differentiate university from collegiate education, and to emphasize certain principles which I believe it essential to hold fast in developing this most advanced grade of study.

But first a word concerning one or two general bearings of collegiate education. The relation of scholarship to character has frequently perplexed discussions of educational polity through a confusion of means and end. The values of intellectual discipline are not absolute. They are related to the whole system of interests which the life of the individual comprises, and that education which has not tended to increased sanity and poise of character and a wider range of appreciation has missed its final justification. But the attainment of these ulterior goods is subordinate to the primary aim of orienting the student in the knowledge of his time, and of training his mind in habits of logical thought. The function of education is imperiled when this end is lost sight of, and the teacher conceives his chief duty to be the establishment of moral habits and the upbuilding of character, instead of the training and informing of the mind.

All life is indeed disciplinary, and every experience rightly treated should mould the will and enrich the practical sagacity



of its subject. The education of the school, like all formative exercises, should not only increase the range of the student's acquaintance with facts, but should also affect his whole philosophical outlook on the one hand, and his practical control of affairs on the other. The educator does indeed believe that no item of sincere intellectual discipline shall be found lacking when the account of a man's moral and personal worth is cast up; but whatever the ultimate ends to which formal education is thus ancillary, the immediate task of the latter is intellectual development, not moral discipline nor practical training. "It seeks," an American college president has said, "the highest manhood through the sincerest scholarship." Every final gain along utilitarian or cultural lines must be won under the conditions imposed by its own special methods. If character cannot be developed through systematic training of the mind, and if formal education has no other independent aim, its claim to existence is no longer valid.

The second of these general topics is the utilitarian value of collegiate study and its place in an ideal scheme of education. To you I need not become an apologist for academic training, but in many quarters its purpose and worth are subjects of debate, the one misunderstood, the other decried. Why should you spend these years in scholarly retirement? Why study dead languages which you will forget, higher mathematics which you will never use, history which will not help you to an income, philosophy which is barren and contradictory speculation? These are the most precious years of a student's life, when the capacity for acquisition and adaptation is at its height. You have no moment to lose if you would attain success in your business or profession. The world to-day gives credit only for useful knowledge. Make every item of training and information count. See that each is related to a visible commercial return. The college is an archaic interlude between two serious pieces of business,—the general preparation of the public schools, and the special training which one's later occupation demands. Cut it out, therefore; pass directly from the high school to the business office and the technological institute.

Contrary to these arguments, I am convinced that within the limits of commercial affairs themselves such a liberal education as we are here considering possesses a value which is enhanced in proportion as one's control of men and affairs expands. If the charge of inutility be a serious one at all, it is most so in the lower and mechanical forms of occupation, and ceases to have weight wherever success depends upon ability to discern the complex currents of cause and effect in the world and a psychological insight into the motives and characters of men. Of what advantage are these studies to the business man? Where, I ask in return, is the business man who is man of business alone? It is a false and artificial abstraction which underlies such a conception. Hath not a business man eyes? Hath not a business man hands, organs, dimensions, senses, affections, passions? If you prick him does he not bleed? If you tickle him does he not laugh? If he is like you in the rest he will resemble you in profiting by the most liberal training which can be provided.

For it is its capacity to contribute to the deeper satisfaction which life is capable of affording that I conceive to be the chief claim which the years of college study have upon a place in our educational system. The student who seeks knowledge alone misses half the meaning of college life. His development comes indeed through study, but it should mean far more than a knowledge of phenomena and their laws—as much more as culture means more than information. It should have freed him from that prejudice which is the bane of ignorance and the penalty of specialism; it should have made him sensitive to intellectual sincerity and consistency; it should have opened to him, in these studies, the springs of perennial delight.

All these things may seem intangible and undefinable, but the change is none the less profound and enduring. Its outcome is an atmosphere, invisible in itself, through which the student views life and its expression. The information one gets at college is at best an unstable acquisition, and unless it be related in some special manner to one's subsequent professional activities the bulk of it dissolves swiftly away; but one may see it go and yet be sure that underlying this superficial attainment

and unaffected by its disappearance is a positive possession which endures because it has become part of one's own intellectual spirit. It is a capacity more justly to appraise the values of life, to reason more soundly about events and men, to behold the world in a clearer and more undistorted vision. To have won this is to have received a liberal education. It is not necessarily a generous education, one which has offered various and intense mental stimulation. It is an education whose result is chiefly seen in what has finely been called "a rectification of the unconscious personality."

It is the cultivation of these qualities which furnishes the criteria of the college's ideal desiderata; for what is needful is not an exhaustive knowledge of any group of facts, but such a general acquaintance with natural laws and human history as will make possible an intelligent appreciation of the thought and achievements of man.

The nature of the special studies which should compose a college course is subject to wide variation, depending upon the personal inclinations of the student; but it should embrace three general branches, no one of which, under our present conditions of civilization, can be omitted without seriously imperiling the student's right to be called a man of liberal education. These three subjects are literature, history, and science. The study of science in modern days is indispensable, not only for the fact that it takes us away from ourselves and enriches our mental life with a group of healthy, objective interests, but also—and perhaps even more importantly—because of the manifold ways in which scientific knowledge and its applications are brought into contact with our daily thought and intercourse. An acquaintance with the more general facts of natural science is imperative for the very comprehension of contemporary thought, much more for that appreciative interpretation of experience which we call culture.

By history I mean the full record of human development and accomplishment. I can conceive of no more lamentable educational misfortune than that a man's view of the world in which he lives should lack historical perspective. Without a sympathetic understanding of human evolution no political

form, no social usage, no psychological experience is rightly intelligible. By literature I mean the sum of man's reflection upon experience, including philosophy,—which the ancients called poetry,—as well as literature in the technical sense. Its message is more intimate and personal than that of history. It interprets the lives of our fellow men, and illuminates the processes of our own souls; for the appreciation of literature is the discovery in it of a revelation of our experience. The value of philosophical studies is identical with that of literature. The philosophy of any time or people is the reflection of its deepest intellectual and moral needs. To have seriously faced these problems, and to have attempted to put into intelligible forms one's final criticism of life, goes far toward giving the student a sound and logical mental habit.

The aim of college training may then be summed up in a single word—culture, an appreciative acquaintance with the permanent expression of human thought. Its characters are two, breadth of knowledge and catholicity of sympathy. The college seeks to extend the student's information in history, in literature, in science. Its graduate should be a well-informed man. He should possess a general acquaintance with the more important results of investigation and more significant expressions of emotion, so that he may be able to apprehend the meaning of new discoveries and achievements within the various domains of thought. It is as serious a lack for a college-trained man to be ignorant of fundamental truths of science, or important historical movements, or great literary expressions, as for the schoolboy to be unable to spell correctly or to give the meaning of the words of his mother tongue.

College training stands also for criticism. The student should be taught to discriminate between good and bad literary form, between valid and vicious methods of reasoning, and to appreciate the values of the things with which he is becoming acquainted. His standards of taste and judgment should be formed, as well as his knowledge rounded out. He should be able to read widely and to listen intelligently. The college, in short, seeks to develop that capacity for intellectual orientation and that sense of familiarity with the general drift of human

thought which prevents ill-formed and prejudiced opinion, which gives discernment and rationality of judgment, and which puts the man who possesses it at his ease in all cultivated society.

The aim of the university, likewise, may be stated in a word,—scholarship. Its characters are two: specialization and research. The object of the university, whether existing as a separate institution or as part of a comprehensive system including lower as well as higher types of discipline, is the training of a body of technical scholars in the methods of their several special sciences. It is incompatible with the idea for which the institution stands that those who are of its membership should scatter their energies over a variety of studies. Exhaustive knowledge is essentially of a limited field, and the prosecution of work according to university methods depends fundamentally upon specialization of interest and the concentration of activity upon a single branch of science. The restriction of activity by limits within which approximately exhaustive knowledge may be attained is not the end of university training, but the indispensable means by which is developed in each student the capacity for productive investigation.

Every university graduate should be a man so equipped with technical knowledge, so trained in special method, that within the limits of his chosen subject he shall be able to make independent contribution to the sum of human knowledge. Moreover, the certificate of his graduation should be in itself evidence of the efficiency of his training by exhibiting the actual accomplishment of one such piece of original investigation concerning a special topic.

The university as thus defined consists in America of a variety of institutions more or less technical in their character, among which the least specialized is the graduate school. The relation of this department to the system of college studies with which it is ordinarily connected has tended to obscure the distinctive character of university work in general. In many instances the work done in graduate courses is but a prolongation of collegiate training, assuming the point of view and depending upon the methods of that department of education.

This lack of demarcation is emphasized by the existence of an intermediate degree lying between those which respectively mark college and university graduation. The Master's degree does not signalize the conclusion of any process of training, nor the attainment of any new grade of activity on the part of the student. This is recognized in the majority of our institutions by the nature of the requirements imposed for its attainment. These demand commonly the addition of a certain amount of collegiate study, the writing of an essay and the lapse of a specified period of time after the conferring of the Bachelor's degree. It is, in short, a title of slight significance, and the situation would be clarified if it were done away with as a university degree.

The work of the graduate school is set off from that of other departments of the university, which we call professional schools, in virtue of the topics of study which it comprises, and not by reason of differences in their points of view or methods. The work of the graduate school, as literally as that of the schools of law and medicine, is to train a body of special experts. Their topics of study are to be differentiated chiefly in view of their relations to the affairs of practical life. Their function is not to afford training in the technical arts of medicine, law, engineering and the like. Its special aim is to produce men capable of scientific investigation, not those skilled in applying the results of such research to the solution of practical problems. In their development these two activities are indeed inseparable. Scientific knowledge is the sole condition which makes possible the rational control and use of material. The study of mechanics is concerned only with the determination of the laws of change in physical bodies, but the shape of every girder and thickness of every bolt, the proportion of every building and form of every projectile, are controlled by the principles which the analytic study of mechanical forces and laws has made known. Chemistry in its analysis has no concern with the dye-stuffs and drugs, the foods and explosives, which are compounded from the substances it studies; yet sanitary diets and curative prescriptions and beautiful fabrics could not possibly have reached their present development ex-

cept by virtue of the knowledge which pure chemistry afforded. Science and practice march hand in hand, but the study of the one group of facts is university, that of the other technological, training.

The great professional schools seek both ends. The physician, the advocate, the chemist, the engineer, are men whose activities embody the application not of rules but of principles to the work in hand. Their knowledge is not empirical, but rational and scientific. In so far, then, as special scholarly study is involved in his work, the professional student is engaged in university activities; but his standing must continue to be confused by the fact that his immediate interest lies not solely nor chiefly in forwarding the knowledge of men concerning his own special subject-matter, but in applying such knowledge to the practice of the industrial and technical arts. These schools are rightly part of the university system only in so far as they pursue the study of the pure sciences of mechanics, chemistry, physiology, jurisprudence and the like, and further research along these lines. There is no class of facts and no department of human investigation which may not properly be included within the range of university studies.

During the past quarter century the organization and administration of the professional schools in the leading institutions of America have manifested a steady progress toward the university point of view. It is shown in the increased range of scholarly attainments demanded of those who would enter upon the studies of these schools; it is shown in the prolongation of the period of study required for their final degrees; it is shown in the increasing emphasis which has been laid upon a knowledge of the scientific bases of all technical training; it is shown in the growing encouragement which is given to independent research. More and more extensively, therefore, is a wide range of information and a sound and disciplined judgment presupposed in those who take up the study of technical problems in each special science.

The affiliation of the university with the college is mental, not local or structural. The same freedom of choice should be maintained here as in passing from the preparatory school to

the college. The considerations upon which selection fitly turns have reference solely to the original force of the men who direct the various departments of study in different universities, to the adequacy of the equipment which is provided for research, and to the geographical relations of the institution to supplies of material for the investigations which are to be undertaken.

The conditions which ensure breadth and wholesomeness in college life become matters of indifference in the university; for in the latter it is not the variety of interests represented and the bringing together of many types of local culture which make for strength, but the singleness of enthusiasm for intellectual discovery which exists among a body of men pursuing common objects of investigation. The graduate schools of a university do not logically receive the generations which the college connected therewith brings forth from year to year. Local bonds have no proper value here, and every practicable facility should be provided which will enable the university to draw its constituents from the widest geographical range, and which will permit the graduating members of the college to scatter as freely as possible to institutions where the most adequate means is afforded for carrying on their several special lines of study.

University work is essentially of the class known technically as "residential." The deplorable practice exists in certain American institutions of granting the doctoral degree to those who have never been thus identified with their work. The requirements in such cases are commonly the passing of a set of examinations, the presentation of an essay, and the payment of a considerable fee. The work performed by this class of students is not done at other institutions of a similar character to that which grants the degree. There could ordinarily be no reason for such a transference of credits, and the degree would naturally be sought from the university at which the work was carried on. The offering of degrees for work done *in absentia* is an appeal to those who are compelled to carry on their studies privately and without the aid of that literary and experimental equipment which is afforded only by extensive libraries and laboratories, and which is indispensable to the successful pursuit of that work for which the university degree stands.



Almost all our universities add to the general condition that the candidate's work shall have been done at some recognized institution, the further requirement that a considerable portion of that work shall be pursued at the institution from which his university degree is to be received. The first of these conditions ensures the student's access to adequate material and equipment for the prosecution of his studies; the second secures that personal knowledge of his character as a student which in the conferring of this recognition of attainment—the highest which the educational system comprises—is of the first importance. I recall only three institutions of consideration where the condition of residence is not specified. In a series of fifty schools which grant the doctoral degree,—among which are to be found all the more prominent universities of the country,—twenty-three require at least one year of resident study, nineteen require two years, and five demand even a period of three years' residence for the attainment of the final certificate.

The work which a university student does is not necessarily carried on at a single institution. That work should indeed be conceived as an essential unity, but the pursuance of it may admit, or in virtue of the distribution of material may even require, residence at more than one center of learning in the course of its completion. In such a case the institution from which the final degree is received should be able to vouch for the character of the work as a whole, and wherever possible the complete course of study should be under its direct supervision. One application of this general principle is presented in the system of traveling scholarships, the incumbents of which are still in the most real sense members of the university which has thus honored them; and the custom of returning to that institution for their degrees, instead of presenting their credentials at the foreign universities where they have been temporarily in residence, is much to be commended.

The natural qualification of any student to enter upon university work is the possession of the Bachelor's degree. With a system of education presenting organic continuity no other criterion should be necessary. Of the fifty institutions already mentioned forty-seven require this certificate from candidates

proceeding to the doctorate, two require the Master's degree, and one only leaves the relation unspecified, the latter being an Eastern technical school. The status of the Master's degree, to which reference has already been made, is again indicated by the rarity with which it is made a required preliminary to the doctorate.

The work of the university student culminates in the doctoral thesis. Other criteria are distinctly and permanently of secondary value to the capacity of the student to give evidence of original constructive ability in the results of a special research undertaken and carried on by himself. The task which he is now called upon to perform is of a new and peculiar kind. Hitherto his observation of fact has been under guidance, now it becomes self-directed. Hitherto his criticism has been experimental and subject to correction, now it becomes effective and must be self-reliant. Hitherto his constructive and inventive abilities have been employed in the repetition of demonstrations as a formal discipline, now they are to be put to serious work which invites a merciless criticism. It is, therefore, not the range of his acquaintance with facts which is here of primary importance, though that must be sufficient to enable him to apprehend the value of existing contributions to his special field of research. It is not even the measure of his logical penetration in criticising the productions of other minds, though such sanity and acumen are essential to all productive work of high order. It is the possession of that scientific vision and inductive grasp which makes possible the accomplishment of the perfectly definite task which is set before him; namely, the successful prosecution of a problem in experimental or historical science.

From its very nature the subject of the doctoral thesis cannot well be prescribed by an external authority. It represents the direction of the student's own intellectual growth, and the theorems with which it is concerned must needs be of those problems with which he is brought face to face in his own thinking. So long as he goes on assimilating the thought of others without advancing beyond it, no such attitude toward the world of knowledge as the doctoral thesis presupposes can arise in his mind. Original scientific analysis or philosophical construction

appears only when limitation and inadequacy are immediately felt and an explicit and sustained attempt is made to supply the deficiency. It is evident that such problems must be set by the student himself, in the sense at least that he must feel the shock of discovery by an immediate realization of the actuality of their existence within his own horizon.

The prescription of topics for essays is eminently wise at all preceding stages of the student's career ; for there the need is to ensure a sufficiently varied material for the application of those capacities for selective and discriminative thought which it is the aim of the educator to develop. But such an imposition would be disastrous in that piece of composition in which the student undertakes to show not only his mastery of method, but also the application of inventive skill and a disciplined imagination to the solution of an original problem in science or philosophy.

The outcome of the thesis work should be positive. Within the scope of the term, as here employed, falls destructive criticism, the so-called negative results of experimental science, such as are involved in the refutation of an historical error or the demonstration of the inapplicability of an assumed hypothesis in science. In both cases a positive advance in knowledge has been made by establishing true historical relations and closing false byways to vain exploration in the future. The thesis must show some bit of knowledge which previous to the work of the writer did not exist, and which owes its existence to his patience and penetration. No such bit of knowledge can rightly be called insignificant. Special and minute it may be in the highest degree ; to the layman it may be unintelligible or of little practical importance, but somewhere in the general system of science it has its place,—a place which indeed in the largest sense may be of high significance for that very body of secure and practical knowledge upon which the conduct and enjoyment of ordinary life depend.

The doctoral thesis is therefore of a class of work which from its very nature should be known to other productive scholars. It springs out of a field of activity which, in all ordinary cases, is common to a group of workers, since upon the existence of a

body of literature concerning its general province the interest of the student in his special topic as a matter of course arises. The publication of such theses is both negatively and positively important; negatively, in that the same problems are likely to arise in the minds of others as well as in that of the writer when all are pursuing the same general ends, and the communication of each new contribution to knowledge obviates the misfortune of fruitlessly duplicated work; and positively, because every addition to the sum of special knowledge illuminates the pathway of the investigator, and thus furthers the progress of other research. The value of the alluring yet perilous goal of publicity as an incentive to the highest activity of which the candidate is capable needs no emphasis.

While pointing out the value of documentary evidence, both in relation to the entrance of the student upon university study and to his graduation from it, the fact must not be lost sight of that examinations possess a proper function in that sphere of training as well as in the college. It has been said that the topic of a doctoral thesis cannot well be too technical and specialized. It is nevertheless possible for the student to confine his attention to such a narrow range of related facts that, while the particular piece of work in question may have been carried through satisfactorily, his efficiency as an investigator, even in that special branch of science, is impaired through a failure to apprehend the interrelations of its phenomena with those of independent but closely allied fields of study.

This is not a matter of general culture, nor one for which the college can be relied on to provide. It is distinctly a question of scholarship, and concerns systematic acquaintance with a province of related facts all of which bear more or less directly upon the special phenomena which the student has selected as his own field of work. The thesis is evidence of the specialization of activity upon a definite problem; these examinations aim to prevent unhealthy narrowness of view and to ensure sanity of scholarship on the part of the student. Out of the fifty schools referred to above forty-four make the successful passing of examinations obligatory.

The method of these examinations is of interest. The stu-

dent has much practice in written work throughout his training, and in future years a large part of the activities which he manifests will find expression in the same form. In relation to such production, the mature scholar differs from the young student as much in possessing a serviceable knowledge of the sources of information concerning any given topic as in having an acquaintance with its general facts. But it is not sufficient that this knowledge should be docketed in reference books; it must be systematized and available, so that the student may be an intelligent exponent and debater under circumstances in which no leisure is afforded for consultation of authors or written preparation of his views. I am of the opinion that a valuable aspect of the scholar's preparation has been lost sight of in proportion as the method of training involved in oral discussion and examination is allowed to lapse. Sixteen universities of those already cited include an oral examination in their requirements for the doctor's degree, to which number a large addition should probably be made, since in twenty-six cases of the forty-four institutions which set examinations the character of the test is not specified.

For completing these examinations in many institutions a knowledge of one or more foreign languages is necessary. The bearing of this requirement is sometimes misunderstood. The point of view which it embodies is wholly distinct from that purpose which in the college commonly fosters a study of the classics and modern languages. To the undergraduate these disciplines are of value chiefly for the new range of stimulations which they afford in presenting to him other types of civilization and expression than his own, and for the resultant enlargement of his intellectual horizon, and the quickening of his sympathy with human experience at a multitude of novel points. For the university student, on the other hand, the enriching of character and deepening of enjoyment in life form no part of the significance which these linguistic attainments possess. They are purely instrumental to scholarship, and are important, nay, indispensable elements in his equipment, for the reason that without the knowledge of more than his own tongue the student will inevitably be shut out from sources of information concern-

ing his material, the lack of which must lay the results of his work, and even his method itself, open to grave suspicion. Of the fifty American universities above quoted twenty-nine require a knowledge of both French and German, seven require Latin in addition to the foregoing, one requires German only, and in the case of twelve institutions acquaintance with foreign languages is either not required or not specified.

Of the wholesomeness of this linguistic demand there can be no question. The work of each scientific scholar is becoming ever more intimately dependent upon the labors of all others as the nations draw into closer communication with one another, and we look for the swift approach of uniformity of opinion in regard to this requirement when no graduate of a university in good standing shall be without a reading knowledge of at least two modern languages in addition to his own tongue.



## *Some Thoughts on College Entrance Requirements*

FRANCIS RAMALEY, BOULDER, COLO.



**W**HAT is college preparation? Some years ago the high school course actually prepared the student to take up his work in college; in other words, the college work was a continuation of that given in the high school. Latin, Greek and mathematics formed the main part of the course of study in both high school and college, and the students entering the higher institution without a thorough grounding in these subjects could find very little to do. At the present time the subjects of Latin, Greek and mathematics form only a very small part of the work done in the college or university. Aside from these branches, practically every subject taught there can be begun without previous training. A student of good ability might enter the university with but one year's high school preparation, stay four years, and complete satisfactorily the various courses which he might elect. Thus we see that the high school course no longer actually "prepares" for college. Many subjects may be begun in the college or university, since the elementary courses are actually given there.

Let us see if we can find the meaning of the preparatory course. Is it intended to fit the student for certain special branches, or is it merely to insure a trained mind? I believe that a study of entrance requirements in state universities at the present time will lead to an affirmative answer to the second part of our question. Thus we find that many of the more progressive universities no longer have rigid requirements for entrance, but simply ask that the applicant have a thorough four-year course in the secondary school.

What foreign languages should be required? Great stress was formerly laid on preparation in foreign languages. Now, however, these subjects are no longer considered so essential.

Students are permitted to choose among the various foreign languages, and carrying out the elective principle the student is allowed to present other subjects in place of part or all of the language. At the University of Michigan, for example, Greek and Latin are not required for entrance, and in fact only two years in foreign language is required. At the University of Wisconsin, for certain courses the student must present credits in Greek and Latin; but there are other courses open to those who have had only modern language, or even to those who have no language but English. At the University of Minnesota no foreign language of any kind is required for entrance. At many of the other state universities but two years' work in foreign language is required.

We may well ask why the student should be required to study foreign languages in the high school and then be required to continue the same in the university. The so-called "tool value" of languages, especially modern, is often exaggerated. It is true that a student who expects to become a professional man of science, as a chemist or botanist or physicist, should have a good reading knowledge of French and German and also know something of Greek and Latin. Still it is not necessary to require him to pursue these subjects in the high school. If he does not elect them there he will elect them in the university. The student who intends to become a teacher of language will prepare himself by the study of one or more foreign languages. The student who expects to teach history or philosophy or any other branch in the university will do the same.

But how many of our students actually look forward to such careers as we have suggested? The great majority of them will not pursue in college any subject for more than two years or perhaps, at the very outside, three years. In order to carry on this work there is little need for the study of any foreign language. However, a certain knowledge of Latin would surely be of very great value in any line of study.

Have we been following a wrong principle? It seems to the writer that we have been making a great mistake all along in our requirements for admission to the different courses in the universities. In order to enter the scientific course students



must present high school credits for about three years' work in science. When these students reach the university they are for the most part put into classes along with others who have had no high school training in these special branches. If they enter the more advanced courses they are not likely to be so well prepared as those who have had the elementary work in college. The high school courses in science are well adapted to the needs of students who do not pursue these subjects farther. They might well be required for entrance to the classical and philosophical courses in the university, but not to the scientific course. If the applicant for admission to the B. S. course has had "preparatory" work in science, well and good; but if he has not it is no matter. If the student wishes to make a specialty of modern languages in the university he may begin these subjects in the high school, but this is not necessary. The young man or woman with training in science should be welcomed to the language courses.

If, as is generally supposed, the function of the university is to give the student a liberal education, then what we should require for entrance to the scientific course would rather be subjects not directly related to science. The same principle holds good in regard to the classical course. Students enter this course with a large amount of preparation in Latin and Greek and frequently with no science and little work in the new humanities. Would it not be much more sensible to require science and history and modern language for entrance to the classical course, and reduce somewhat the requirements in the ancient languages?

It happens at the present time that students in the scientific course do have considerable training in languages and the new humanities, and so they receive a general all around education. The classical course, as now given in most colleges, is really the only one-sided course, for in that students have practically no training whatever in science. Their whole course is of such a nature that they are not likely to elect work in the sciences to make up for the meager entrance requirements in those lines.

What of the future? Just as the universities have been able to make their own courses of study largely elective, so they will

in time allow considerable election of high school studies by applicants for admission. The high school course can no longer be called a preparatory course in the sense that it is prerequisite to work in the university. Work in the university no longer fits on to the high school course in any definite way. The university offers rather a course of general culture, and in order that the student may pursue such a course intelligently he should have four years' training in the high school. But that this training should be of any specific kind is not necessary. There is every reason to believe that in the near future the universities will see that it is the amount and quality of high school training rather than the specific character of such training that is needed in their applicants.

### *Silence and Serenity*

Silence and serenity  
Are precious words to me,  
For they help make the atmosphere  
Of peace and charity.

And so I chant them as a nun  
Chants over her pet beads,  
To bring the Holy Spirit near  
And lead to kindly deeds.

ELIZABETH PORTER GOULD.

## *What is Multiplication?*

A. LATHAM BAKER, PH.D., BROOKLYN, N. Y.



ATTENTION has been called to this question by the recent appearance of Judd's *Genetic Psychology for Teachers*, in which is reproduced the old misapprehension that multiplication is a special phase of addition. The prominence of the writer and the unusual merit of the book compel attention to an error that otherwise might be passed over in silence as another instance of the conservatism of pedagogy and of the more than feline multiplicity of lives possessed by this ancient inaccuracy. Its reappearance in such authoritative form is unfortunate for those who still adhere to the ancient error, who thus are strengthened in their orthodoxy.

He says, "When we come to multiplication and division we have modifications of the process of grouping [addition and subtraction]. . . Division is therefore a special case of subtraction." "Division and multiplication thus come to be processes dealing with units of higher order" [produced by addition and subtraction].

These quotations show that the writer has confused the simple and universally applicable operation of addition with the far more complicated and, in its applicability, limited operation of multiplication.

It is curiously surprising that the acumen so conspicuous throughout the book did not discover that the definition breaks down the moment it is applied to fractions. Particularly noticeable is the failure when applied to stroke and vector multiplication, where no amount of addition of the original elements will produce the quotient.

Likewise in his definition of division he has confused the abstract operation of division with the concrete semi-mechanical operation of finding the quotient. To define division as a special case of subtraction because in the mechanico-mental

operation of getting the result we do perform subtractions is no more reasonable than to define division as a special phase of crank-turning because we can arrive at the result by turning the crank of a calculating machine. It should be carefully distinguished that division is a mental operation the result of which is arrived at, except in the case of simple and familiar quantities, by a series of partial divisions and subtractions, each part of the quotient being subtracted as soon as ascertained. But these subtractions are not division, nor have they properly anything to do with the division, being merely operations to clear away the *débris* for a new partial division. They have nothing to do with the division *per se*, being merely a house-cleaning process to prepare for a new partial division.

Addition is merely accumulative combination of elements, and is applicable not only to mathematical concepts but to concrete objects, fingers, pebbles, etc., and to this extent is not a purely mathematical operation; it is concrete as well as abstract, in that it can be applied to concrete objects.

Subtraction is the decumulative combination of elements, and is likewise applicable to concrete objects, within the limits of concreteness. When applied to abstract concepts, debt, direction, etc., its continued application results in a new number concept, the negative number.

These two operations are operations which do not change the original elements but merely adjoin them unchanged into a cumulative (or decumulative) result. So long as the elements are unchanged these are the only possible operations.

To arrive at an idea of multiplication we must ascertain the permissible operations performable upon number. To do this we must find out the properties of number. Primary number has only one property, its differentness from unity. This property can be used as a directory mandate for the possible operations. If we use the evolutory differentness from unity, the differentness which produces the number from unity, as the mandate we get multiplication, the doing to the operand (multiplier) what was done to unity to produce the operator (multiplier). If we use the involutory differentness, the differentness which converts the number into unity, we get division, the doing

to the operand (dividend) what was done to the operator (divisor) to convert it into unity.

These are transformational operations; operations which transform the operand into an entirely new and different number. They are purely algebraic, being limited, unlike addition and subtraction, to operations upon discrete number.

A not entirely satisfactory illustration of the difference between the two operations of addition and multiplication is the putting of two canes together for addition; for multiplication we would be compelled, because the first was triangular, black, smooth and uniform in size, to transform the second cane, which was round, white, knotted, tapering and with a knob on the end, into a triangular, black, smooth, prismatic stick. It is transformed into an entirely new and distinct form, and its original features have disappeared.

So in numbers, addition and subtraction are merely adjunction without change of the original elements. Multiplication and division are destructive transformations, the destruction of one element and the production of an entirely new and different one, like the growth of a plant from the seed.

From primary number these are all the operations permissible until we produce by subtraction the new concept, negative numbers, introducing reversion; and by division (evolution) the additional concept, complex numbers, introducing mean reversion.

These definitions of the operations are general, holding for all branches of discrete mathematics, algebra, complex functions, quaternions.

Involution is merely that special case of multiplication in which the first operand and all operators are the same, working from unity to the result.

Evolution is that special case of division in which all the operators and the last operand are the same, working from the first operand toward unity.

Incidentally, as a corollary to this, comes up the similarly faulty definition of exponent, so persistent in the schoolroom, the number which shows how many times the base is taken as a factor. This is absurd, of course, when the exponent is a

fraction, and is apologized for by asking for an extension of the idea to cover fractions. Why not start right at the beginning, and define exponent as the number which shows how many equal multiplicative and divisive operations are to be performed upon the base? Whether in the case of fractional exponents we should speak of power or not, about which many make so much ado, is merely a question of definition; whether we define power as the result of equal integral multiplicative operations, or of equal operations, multiplicative or divisive. The question is largely one of convenience and convention, narrowness or breadth, and not one of right or wrong.

### *In the Piazza San Marco*

Mosque-like and many-domed in the sky it shone,  
The eyes of men to dazzle and amaze,  
The great barbaric splendor, all ablaze  
With rich mosaic, vari-colored stone,  
And brazen steeds upspringing to the sun.  
The triple pedestals their mastheads raise,  
Where flowed the gonfalons in the golden days,  
When Venice, Cyprus and Corea were one.  
Look, mass is over,—shriven of their sins,  
Forth-issuing from the scented darkness sad,  
I look to see the fair Venetian girls,  
Like Callari's proud Saint Catharines,  
Serene and tall, in splendid satins clad,  
Their blond hair bound with loops of pendant pearls.

ISABEL HUNTER.

## *The Relation of Drawing to Other Subjects*

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SOME learned person has said that drawing is the art of representing objects by lines made with a point; delineation as distinguished from painting. However, although this definition may be as good as any so far as the word drawing in itself is concerned, when we come to study the topic we cannot but feel that it is not altogether adequate for a perfectly clear understanding of the word.

Consequently let us assume that drawing in this particular case means that study through which it is possible to produce works of art. In other words, the thing we are thinking about is that study in the course of which we shall be introduced to the elementary principles underlying all expressions of art. Or, to repeat, this study should contain within itself sufficient instruction and sufficient training so that a person following faithfully the prescribed course in it should at the end of that course have his mind opened to the possibilities of constructive drawing, decorative drawing, representative drawing, and be possessed of some idea of the beautiful. It is not expected that a person will become expert in these subjects, but simply that he will be able to see the possibilities of them. And the best way to name such a course is to call it a course in drawing, although drawing in reality is only one of many subjects taught in it. Consequently during this course of lessons the following subjects and many more would be taken up:—

Constructive drawing.  
Patterns.  
Architectural drawing.  
Pictorial drawing.  
Studies of the human figure.  
Studies of the animal figure.

Composition.  
Color.  
Type forms.  
Working drawings.  
Familiar and beautiful objects.  
Landscapes.

Studies of plant life.  
Character posing.  
Decorative drawing.  
Design.

Groups of fruit or vegetables.  
Historic ornament.  
Creative efforts.  
Picture study.

All this mass of material comes under the head of drawing, and hereafter whenever we speak of drawing we may mean any one of these subdivisions or all of them combined.

When we come to read our title again we meet the words, other subjects. Now what exactly is meant by other subjects? We can do away with any misunderstanding here by changing our title to read, *The Relation of Drawing to Everything Else in the World except the Fine Arts*; and by the fine arts, of course, we mean painting, sculpture and architecture. According to this understanding the title means the relation of drawing, proper, and also its subdivisions, to the other activities of the world at large, be they what they may, only excepting those subjects which by reason of their own nature are so closely associated with drawing as to be virtually one and the same thing.

Teachers of drawing are often asked, Why do we study drawing? What good does it do the child? It would seem that such questions are fast becoming obsolete; but at all events we will look the matter over and form an opinion for ourselves. The few simple drawings, or what not, which the children make are not by any means the sole end of the drawing lesson; they are only one indication of the power which the pupil has developed. The fact that a child can do certain sums in arithmetic does not mean that that is all he can do,—just those two or three examples; but it does mean that the child has developed a reasoning power up to that point; that he can handle a multitude of other problems. And the same explanation holds good in drawing. When a child can make a drawing like the one in plate No. 1, it does not mean that the sketch is to be framed and hung on the wall, necessarily, but that the child, besides having acquired the skill needed to make as good a drawing as this, has also been pushing his powers of observation to a higher pitch.

While this drawing is really not very beautiful, still a person



having even as much ability as here shown would find it of considerable use to him in many lines of work. For instance, if we investigate what the effect of a training in drawing is upon photography, we find that an operator with a little knowledge of values and composition will make prints of considerably more interest than an operator with no training in these subjects. Besides photography it would seem that even a very slight degree of skill would be of use to the milliner in combining colors and arranging textures. Also to the printer in spacing title pages and in handling type for almost any purpose. The merchant also finds a little artistic training of considerable value in dressing shop windows, and clerks are sometimes employed who do nothing else. It is of use also to the military commander in planning his battles, and to the surgeon in studying the body before making an operation. It is, besides this, useful in basketry, weaving, embroidery, dressmaking, household art, pottery, joinery, wood carving, and art metal work.

In fact, it comes up in so many walks of life that it would be almost a waste of time to pursue this investigation any further. However, last but not least, it seems that a little elementary training in drawing must lead us to an appreciation of the beautiful a great deal more sincere than if we had no understanding of the matter at all; very much as a great many



No. 1.

M. M., Hingham High Sch., Massachusetts.

ex-football men enjoy seeing a football game, even though they be far too old and too infirm to actually take part in the game themselves. While a little skill in drawing is unquestionably of considerable advantage to almost anybody, exercises in drawing have yet another virtue,—and this virtue is the advantages which arise from having certain faculties developed by this means. The faculties which are developed and strengthened thus are briefly those of observation, the power of mental imagery and manual dexterity.

Somebody has said that drawing “produces ideas and idea associations which would never originate otherwise, deepening and replenishing the mental life.” Also that “it widens the range and power of emotional experience and comprehension.” Somebody else has said that “the initiative, alertness, and fertility of resource which the American is nowadays credited with displaying, though partly a climatic, is chiefly an educational product.” And it would seem that if these faculties are the result of education, drawing can very justly claim to be of great assistance in developing at least two of them; when a child is required to take very slight suggestions from nature or completely abstract terms, and to evolve a design out of them, there cannot be any better way of stimulating and encouraging his inventive and imitative powers.

If I remember rightly, at the time when Greek art was at its height the Greek drama was also in a most flourishing condition. It might be interesting to make a few comparisons between the plastic arts and the theatre of about 400 B. C. and the plastic arts and the theatre of the present day. The principal difference between the ancient tragedy and the modern is that the plot in the Greek drama was taken, with few exceptions, from the national mythology, and so was of necessity known to the spectators. Of course this is not so in the modern play. However, there is no real difference between the arrangement of the two theatres as far as the seats and the stage are concerned, except that the Greek theatre was larger in every way. Of course the Greek actors wore the mask and the cothurnus, and were fewer in number than in the modern presentations, but their entrances and exits and the literary part of the performance were about the same.

The main distinctions between the two exhibitions, it would seem, lie in their methods of presentation. This would include the differences between the stage setting and the different ways in which the two dramatists would make their story real to the spectator. Professor Blümner says the scenery indicated the place of the action, whether a square in front of a palace, or a street with private houses, or a forest. We must not think of the great variety of scenery known to our modern stage; no doubt, too, they were content with very simple execution, merely hinting at the scene required. Suppose we read just a few lines from the *Medea* of Euripides, and consider how a modern playwright might produce this scene and how Euripides actually did produce it:—

“But she, having started from her seat, flies, all on fire, tossing her hair and head on this side and that side, desirous of shaking off the chaplet; but the golden wreath firmly kept its hold; but the fire when she shook her hair blazed out with double fury, and she sinks upon the ground overcome by her sufferings, difficult for anyone except her father to recognize. For neither was the expression of her eyes clear nor her noble countenance, but the blood was dropping from the top of her head mixed with fire. But her flesh was dropping off her bones, as the tear from the pine tree, by the hidden fangs of the poison—a sight of horror. But all feared to touch the body, for we had her fate to warn us.”

A novel, *She*, by Rider Haggard, had a scene in it something like this. A young and beautiful woman is changed by magic into an aged hag, and finally into a heap of ashes. If I have been correctly informed, this change actually takes place before the very eyes of the audience. Therefore it seems very likely that a modern dramatist would present the lines just quoted in very much the same way. The woman would appear to be actually burned before the spectators, the illusion being helped out by all the accessories of modern stage craft. On the other hand, Euripides merely had a messenger report that he had seen these events take place. One reason for this is, maybe, that the Greeks at this time were so trained, and were by nature such an artistic people, that they were perfectly able to image for themselves the scene suggested by the story of the

poet, and did not need any further help to see the picture than that furnished by the text of the play.

At the present time, however, the great mass of the people have not any such power of mental imagery, and so the scenes have to be acted out for them as near to life as possible. It would seem, nevertheless, that the work in drawing in the schools is beginning to be felt in this regard, considering the success of *Everyman* and other plays of that nature. This power of mental imagery is helpful not only in making pictures, but also in almost any kind of mental calculations, and in



No. 2.

recalling details of events of importance to both professional and business men. It is the power of throwing up before the mind instantly the picture of a scene just as it happened.

Gen. Lew Wallace says of one of his characters that "besides being a master of design in many branches of art, he had an amazing faculty of describing the things he designed.

That is saying, he had the mind's eye to see his conceptions precisely as they would appear in the finished state. So in talking his subjects always seemed before him for portraiture." In the actual application of these faculties to everyday life it would seem as if they would be of value to the railroad engineer, the marksman, clerks in handling money, the jeweler, watchmaker, gunsmith, bookbinder, etc., and to the playwright, author, musician, poet, etc.

Some one has said "beauty is more useful than the useful"; some one else has said that "beauty should be the end of life"; also that "beauty is the clearest manifestation of perfection." What-

ever this quality of beauty may be, it certainly is most desirable, and the question immediately arises as to how it can be obtained. Of course, there is only one way to learn anything now-a-days and that is to learn it at school. And how can a sense of beauty be cultivated any more quickly or easily than by drawing? Exercises of this kind open the mind to the beauties of form and color without doubt, and also to more abstract qualities. An appreciation of the beauty of balance must, it would seem go hand in hand with a keener sense of the difference between right and wrong. A study of proportion must, it would seem, help a person to decide between great and little acts, important and less important obligations and duties. It would seem that a properly censored course in drawing could not but be elevating in its effect, because the close study of nature which it involves and the sensitiveness to the beautiful which it inculcates must intensify the normal dislike of the ugly.



No. 3.

I regret that I have not been able to find a satisfactory definition of beauty. Emerson says that "If eyes were made for seeing, then beauty is its own excuse for being." But unfortunately just now we are not looking for excuses, but for a definition. So I have taken the liberty of making a statement for myself. It is this: That inanimate objects which are not unsightly are beautiful. For example, any lifeless object which is not distressing to look at ought to contain some element of beauty. Of course, I do not say that this definition is absolutely true; I do not know whether it is or not, but for the

experiment which I would like to try I think it will suffice. In plate No. 2 there are a few tones of color and value. The people to whom I have exhibited it have assured me that they did not experience any unpleasant sensations in looking at it. And so I have taken it for granted that this piece of canvas contains some element of beauty. Plate No. 3 is a piece of paper with some lines on it.

People have assured me, again, that this diagram was not absolutely repulsive in appearance, so I have inferred that it also

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No. 4.

No. 5.



No. 6.

contains some element of beauty. In plate No. 4 we have another piece of paper with some more lines on it which, it seems to me, is also suggestive of something pleasant. And in plate No. 5 we have another somewhat similar.

These are, of course, but four elements out of many thousands.

Now supposing we combine these elements, what do we get? We get plates Nos. 6 and 7.

Plates Nos. 2 and 3 represent one degree of beauty and plate No. 6 another.

Plates Nos. 4 and 5 represent one degree of beauty and plate No. 7 another.

### **“The mountain nymph, sweet liberty.”**

No. 7.

You have probably seen pictures based on either plates No. 2 or No. 3, and also pictures based upon the second idea in plate No. 6; but which is the more beautiful I leave for you to decide. This experiment may be interesting because it is sometimes said that “to most persons art is a small book written in a strange tongue.” There are a great many degrees of beauty. But on the other hand, every person has a right to his own opinion of what is beautiful and what is still more to be admired.

This experiment, maybe, will also be of help in deciding how advanced a degree and what particular qualities of beauty can best be understood by varying classes. It has been said that in literature we do not begin with Wordsworth and Emerson, nor in music with the Ninth Symphony; why should we begin the study of plastic art with its most exalted forms?

If we study the various subjects on the school program with regard to their relations to each other, we find that they do not correlate with one another very well. If we look for any relation between geography and arithmetic we must look in vain. Neither do I see any connection between the study of Latin and the study of music; in fact, in my opinion, the other subjects taught at school stand for themselves, and do not help one another to any marked degree.

When, however, we come to investigate the correlation of drawing with these other subjects,—and by correlation we mean the degree in which drawing enters into and helps in the understanding of other subjects,—we find this: “Successful instruction in nature study requires the use of objects and illustrations. The just aim of the science lesson is to train the child’s power

of observing the objects of nature and to use his eyes and hands in this work. Children should be encouraged to collect specimens and to report what they see in their visits to parks or other places of natural interest."

This is an extract from the report of a superintendent of schools. It seems to me that the correlation here is very close, because if the pupils are able to draw they can make sketches of the trees or flora which they have seen that will fix their habits much more firmly in their minds. Even drawing from the flat copy will help them to distinguish between the various kinds of flora and the other objects in nature study.

However, I should like to call your attention to the fact that while a considerable degree of the success attending the nature lesson is dependent upon the training which the children have had in drawing, I do not see that the progress in drawing will be particularly accelerated by the lessons in nature study.

The point which I want to make here is that there are a great many subjects in the school curriculum which are very much benefited by the study of drawing, and that a great many persons do not fully realize this, but think that the only results produced by the drawing lesson are the few simple sketches made during the drawing period.

Drawing is then a helpful correlative to all subjects requiring the ability to observe, the ability to retain visual images and manual dexterity. Consequently a training in drawing will be of assistance in nature study, manual training, physiology, reading, writing, spelling, arithmetic, geography, and history.

Drawing also correlates with almost every other subject so far as illustrating them with pictures is concerned. Besides this, skill in drawing is useful in arranging and decorating various school leaflets and exercises. In studying English sketches are also useful in describing the operations of daily life, such as ploughing, haying, lumbering, etc. In geography pictures or sketches made out-of-doors are helpful in leading the pupils to an understanding of what islands, peninsulas, promontories, etc., are. A common brook will often furnish all the examples necessary.

The problem which the educator has to solve is this: He has



in rough figures about nine hundred hours of school work a year, and he has about nine years of compulsory training. The raw material which comes into his hands is in the form of little unformed five-year-old children, and at the end of the nine-year course his grammar-school graduates, boys and girls of from thirteen to fourteen years of age, must be on a par with those of other states and countries.

The question, then, for him to decide is how he can best divide up this time so as to produce at the end of the course the highest results. Though there are many high schools throughout the country which are well patronized, still I have been told that the majority of children do not get beyond the grammar school. In fact, only one and one-half per cent of the children in the United States go through the high school.

If this is so it is probably due to the fact that compulsory education ends at about the age of fourteen years. So far as I have been able to ascertain by reading the schedule of study for several grammar schools, the general idea underlying them all has been to give to the pupils, as far as possible, a broad, non-technical education. This is only just, since it is in many cases all the education that a great many of the pupils will ever have. Of course we must grant that when the children come to graduate they ought unquestionably to be able to read, write and cipher. But these subjects are accomplished in their ele-



No. 8.

J. M., Thos. N. Hart Sch., Boston.

ments quite early in the grades, and the question immediately arises, How far are they to be pushed?

This is a matter which is outside of our province. Nevertheless I am very much interested in it from one point of view; that is, that of the drawing teacher. If the school program is to be kept evenly balanced and is not to advance any subject in it to the detriment of any other, does drawing hold in it its fair place. Is as much time devoted to this subject? Not as much as this subject deserves. We do not expect that, but as much time as will produce such results at the end of the term as will be equally good with those produced in the other subjects.

For example, the boys and girls of the ninth grade write compositions on various topics. Now how do these compositions compare with the best literature which we have extant? The following is part of a composition written by an average pupil in a ninth grade in one of the Boston schools:—

#### THE FIRST NEW ENGLAND THANKSGIVING.

“During October, 1621, the Pilgrims held their first Thanksgiving days at Plymouth. A plentiful harvest had been gathered, the Indians were friendly with them, and the loss of life was not so great as it had been. These and other reasons led them to praise the Giver, and days were appointed for that purpose.

“Four men were sent out into the woods to shoot wild fowl, and they returned in the evening staggering under their heavy burdens. The colonists did not have to buy their turkeys, ducks, and geese then, for they were in abundance around them. Meanwhile the busy housewives were polishing their tin and pewter dishes and making ready for the feasting.”

Now suppose we read a short passage from Washington Irving:—

“We one day descried some shapeless object drifting at a distance. At sea everything that breaks the monotony of the surrounding expanse attracts attention. It proved to be the mast of a ship that must have been completely wrecked, for there were the remains of handkerchiefs by which some of the crew had fastened themselves to this spar to prevent their being washed off by the waves. There was no trace by which the name of the ship could be ascertained. The wreck had evi-

dently drifted about for many months; clusters of shellfish had fastened about it, and long sea-weeds flaunted at its sides. But where, thought I, is the crew? Their struggle has long been over; they have gone down amidst the roar of the tempest; their bones lie whitening among the caverns of the deep. Silence, oblivion, like the waves, have closed over them, and no one can tell the story of their end."

Having now formed a comparison of the relative merits of these two literary efforts, suppose we compare a ninth grade drawing with the work of a master.

Compare Plate No. 8. with Plate No. 6.

Is the child's power of expression by the one means equal to his power of expression by the other?



## *Education at the St. Louis Exposition*

GEORGE E. GAY, BOSTON, MASS., DIRECTOR OF THE MASSACHUSETTS  
EDUCATIONAL EXHIBIT



THE Louisiana Purchase Exposition is the third great international exposition to be held in the United States, and is conceived and will be carried on in a form far above the highest vaults of the imagination at preceding expositions. To this result a large number of favoring circumstances will contribute. The Exposition commemorates an important epoch in the history of the country, deeply interesting to the nations of Europe as well as to both North and South America. Its location, almost in the geographical center of the Union, is more favorable to exhibitors and to attendants than either Philadelphia or Chicago. The money invested, fully forty million dollars, is greater than was ever invested in any exposition before. Last, but not least, its management has been and is in the hands of men who have won laurels in exposition work at Philadelphia, Chicago and Paris.

An exposition of such magnitude, inaugurated under such auspicious circumstances, and carried on with such skill, must be of great interest to teachers and students. Here will be collected and made accessible to all the best that man has achieved in his conquest of nature. The magic of the inventor, the genius of the artist and the skill of cunning workmen will unite in placing these triumphs where they can be easily studied and comprehended. Here will be the whole world in miniature. One will pass from Egypt to Jerusalem, from Jerusalem to the Philippines, from the Philippines to New Mexico, from New Mexico to Moscow, in a single day; and what he sees and hears in the several places will be not realistic, but real. Cairo will be a real Cairo; Jerusalem a real Jerusalem, and the language that greets his ears will be the language which the dwellers in Jerusalem heard on the great day of Pentecost.

History, as well as science and geography, will be made real to the student; for not only the present but the past as well

will be placed before his eyes, filled with living men and women. The cliff dwellers will re-enact the life which they lived before Columbus sailed across the Atlantic; the dwellers in farthest India will repeat the scenes which characterized the days of Buddha.

In the midst of this panorama of science, art, history, geography, and anthropology, the Exposition authorities have built a magnificent palace for education, and put in material form the apothem of the French government that "education and instruction are first because through them man enters into life."

In a little world like this, where every building and every object is educational in its purpose and tendency, what special objects shall be selected and placed by themselves to represent education itself? This is the question which was proposed to Mr. Howard J. Rogers, chief of the Department of Education, and which he has attempted to answer in his directions for the preparation of exhibits to be placed in his building. Here will be placed :—

(1) The school literature of all countries. This includes not alone the history and science of pedagogy as found in distinctly professional libraries, but also government and state reports, the history and present condition of school systems and of individual institutions; and text-books and original contributions made by professors and students to every department of human knowledge. To these will be added programs, rules and regulations, catalogues and other printed matter that will make the information on all educational subjects as complete as possible.

(2) Statistical charts, diagrams and tables. No part of the exhibit will be of more interest and value to visitors than the graphic charts. Through graphics the important facts in regard to population, the number and kinds of schools, the number of teachers, the number and age of pupils, the cost of instruction, and many other educational conditions, will be presented in a way so clear and striking that visitors can understand them at a glance.

(3) Models. Illustrative drawings, photographs and models will show the material equipment of educational institutions, buildings with their furniture and fittings, and playgrounds.

(4) Apparatus and appliances for instruction. Apparatus which illustrates a new method or shows the latest development or new application of an important educational principle will be exhibited in great variety. The commercial sections will display all kinds of geographical apparatus, laboratory fittings and materials and instruments of precision.

(5) Pupils' work—literary, scientific, mechanical and artistic. An exhibit of pupils' work may be made to represent the work of a school with considerable clearness and fidelity. Bound volumes of work arranged by years or grades, and illustrating fully the curriculum, are indispensable portions of an exhibit.

What will the teacher learn from the educational exhibits? First of all, he will learn the tremendous importance of education in the present life of the world. He will be impressed as never before with the amount of money, the number of men and the quality of brain and heart that are directing the great educational interests of the world. Seven acres of exhibits will proclaim them as no other possible means could proclaim them, and he will be proud of the fact that he belongs to the noble army of men who in every nation and in every clime are preparing youth for manhood and womanhood.

He will also learn that others are doing in other ways and often in better ways what he is doing in his way. One is tempted to believe that what he does with his whole heart is done as well as it can be done. An exposition of this kind is a great promoter of modesty. "Where are the heathen?" said one visitor to another, after studying the exhibits of the different nations at the Chicago exposition. "In my own county," was the response of the listener.

He who will may rise from his humility to better things. He may find the better way in which some other man does the work which he does. As he compares the exhibit of one nation with that of another, he will add to his own knowledge and his own power the knowledge which others have won and the strength of many men.

The chief results, however, from the study of educational exhibits are not immediate. The wiser knowledge, the new view, the change in attitude are indeed immediate and important. But the new knowledge is the fruitful seed of future wisdom, the new view is the true view, and the change in attitude is a change in direction that affects all future progress.

## *Outline Study of Silas Marner*

MAUD E. KINGSLEY, EAST MACHIAS, ME.

### A. Preparatory Work.

#### I. The Novel.

1. Definition of, varieties of.
2. Place of the novel in literature.
3. Value of the novel.
4. The evolution of the novel: the epic, the drama, the romance, the novel.
5. The rise and growth of the novel.
6. Robinson Crusoe and the Vicar of Wakefield.
7. The first English novelists.
8. Modern English fiction.  
(a) Thackeray, Dickens, Eliot.

### B. First Reading of *Silas Marner*.

#### I. The Narrative.

1. Chapter headings.  
(a) Chapter i, The Wrecking of Marner's Life.  
(b) Chapter ii, The Growth of a Miser.  
(c) Chapter iii, The Cass Family.  
(d) Chapter iv, The Theft.

SUGGESTION.—Let pupils suggest a heading for each chapter and let class discuss carefully the appropriateness of each.

#### 2. Outline of narrative by chapters. Example:—

(a) Chapter i: Favorite method of cloth making; weaving: personal appearance of weavers, superstitions connected with the craft, location of the industry, social position of the weavers; character of the old-time peasant; Silas Marner's trade; description of the cottage; reception of curious urchins; pen picture of Silas; opinion of the villagers concerning Silas (Interpolation); Raveloe; Marner's long residence in Raveloe; his mode of life; physical infirmity; Jem Rodney's story; Mr. Macey's comments; Silas' medical skill; freedom from persecution; his earnings; story of Marner's early life: religion, character, reputation among his fellows; his friend, contrast between the two; chief topic of conversation; Marner's engagement; effect of Marner's infirmity upon Sarah and William; the deacon's illness; charge against Silas, the outcome; Marner's accusation, his departure.

## II. Plan of the Story.

1. Introduction, Chapters i, ii, as far as "This is the history."

- (a) Weaving.

NOTE.—A description of this industry as it arose in the early part of the nineteenth century, with mention of the superstitions clustering around the trade and its followers, and the consequent social position of the weavers as a class, lead up to the introduction of the hero of the tale and account in part for his eccentricities. The introduction is also valuable for the glimpse it gives of the times in which the action of the story is laid.

- (b) Marner's early history.

2. Body of the story ; divided into two parts.

- (a) Chapters ii–xvi.

- (b) Sixteen years after.

3. Conclusion.

## C. Second Reading.

### I. Place of the Action of the Story.

1. Description of.

### II. Time of the Action of the Story.

## III. Characters of the Novel.

1. Characters in order of their appearance ; identification of each.

2. Classification of characters.

- (a) Six chief characters.

- (b) Characters directly concerned in the plot development.

- (c) Characters useless to plot development.

3. Character sketches.

4. Character revealing episodes. (State the significance of each.) The brown pot, scene in the Red House parlor, the selling of Wildfire, Marner's meeting with Jem, Godfrey and the Squire, the yellow gown, Nancy and Miss Gunn, Godfrey and the dead woman, Nancy's reception of Godfrey's confession.

NOTE.—The characteristics of the actors in this story are brought out by conversation rather than by action.

5. Delineative pictures.



**IV. Three Aspects of the Story.**

1. Story of Silas.
  - (a) Early life.
  - (b) Four great changes in his life.
    1. From useful member of the little church to the recluse of Raveloe. Change effected by what means?
    2. From recluse to miser.
    3. From miser to man with no interest whatever in life.
  - (a) Change effected by what means.
  - (b) Characterization of this change. ("Formerly . . . broken," ix.)
    4. From heart-broken man to useful member of society.
  - (c) Characters directly or indirectly concerned in these changes.
2. Story of Godfrey Cass: How connected with Marner story?
3. Story of Eppie: How connected with Cass and Marner stories?

**V. Significant Allusions of the Text.****VI. Manners and Customs of Rural England.**

1. Daily life: Industries, methods of travel, dress, amusements, inns, education, classes of society.
2. Miscellaneous: Latchstring, food, horn lanterns, manners and conversation of the people, etc.
3. Old proverbs, sayings, and superstitions.

**D. Third Reading.****I. Construction of the Novel.**

1. Fundamental thought: Found in the title-verse (learn). The same sentiment is repeated in Chapter xiv ("In old days . . . child's").
2. The plot: The production of the various changes in Marner's character.
  - (a) Chief agencies concerned in the plot development: The loss of the gold; the finding of the child.

## 3. Underplot: Godfrey's secret marriage.

- (a) Incidents developing underplot: Dunstan's journey; the robbery; the finding of Eppie; draining the stone pit.

NOTE.—The scene in the Red House parlor and the finding of the dead woman connect the plot and the underplot.

## 4. Problem discussed in the story: The influence of individuals upon one another.

II. Literary Analysis of *Silas Marner*.

## 1. Excellences of style.

- (a) Great strength in the delineation of character.  
 (b) Life of middle class English folk faultlessly portrayed.  
 (c) Plot simple, and field of action narrow, yet the story is of intense interest.

## 2. Chief fault in literary style: a tendency to moralize.

## 3. Details entering into the construction of the story.

- (a) Dramatic incidents.  
 (b) Expressive similes.  
 (c) Unfamiliar and peculiarly English words and phrases.  
 (d) Bits of noteworthy description: Marner and his loom, the tea-table at Red House, Lantern Yard sixteen years after, Silas amid the gathering at the Rainbow, Aaron singing carols, Raveloe church on Christmas day, the procession marches into the White Parlor, Silas' first glimpse of the child, the bridal procession.  
 (e) Touches revealing the author's subtle humor: Laying up a stock of linen, Marner's idea of the Rainbow, views on pronunciation, story of the glazier's wife, Dolly's opinion of men, Uncle Kimble at cards, description of Mrs. Kimble, etc.  
 (f) Didactic interpolations.

## E. Supplementary Work.

## I. George Eliot.

1. Name by birth, by choice, by marriage.

2. Significant facts in her career.
3. Her position among novelists.
4. Her best known novels.

**NOTE.**—At the bottom of every one of her stories there is a problem of the conscience or the intellect. Here the problem is of the former class.

## II. Theme Subjects.

1. The Novel: Its evolution.
2. Representative Writers of the Victorian Era.
3. Dolly Winthrop, a Character-Sketch.
4. The Glorious Wartime.
5. Important Historical Events of George Eliot's Era.
6. Weaving *vs.* Farming.
7. Silas Marner's Early Life.
8. A Glance through the Window of the Stone Cottage.
9. A Day in Raveloe or Christmas in Raveloe.
10. Dunstan's Story.
11. Lessons Learned from Silas Marner.
12. The Stone Cottage: Two Aspects.
13. An Evening at Rainbow Inn.
14. Aaron.
15. The Problem and Moral of the Novel.



## *Individual Work in Composition Writing*

MARGARET ALTON, TROY, N. Y.



HERE are probably few subjects more difficult to teach successfully than the composition part of first-year English in the high school. Girls and boys come to this work with practically no power of original thought, with small conception of why we should divide our thought expression into paragraphs and sentences, with no understanding of why we do not say everything in exactly the same way, and, above all, with the vaguest idea possible of why they are to study the subject at all. To do away with this apathetic mental condition, to rouse the mind to activity is not easy, but must it not be done if the work is to be of value?

How is this to be done? In other words, how are we to succeed in teaching English composition? Commonly our practice would seem to say: Give out a subject for an essay, limiting the number of words; look over the work handed in, marking every error; require the first draft to be corrected; if it is not right this time, cause it to be rewritten again. But we must agree, those of us who follow this practice, that poor, careless, thoughtless use of pencil and paper results,—we are requiring our students to waste time and material.

More and more, in my own experience, I am compelled to look at classes not as a whole, but as made up of individuals,—each with peculiar gifts and peculiar problems to be solved. And I believe that we shall succeed in making our first-year students thinkers and writers of clear, interesting sentences and paragraphs in so far as we know our girls and boys individually,—know their failings, know their excellencies. We do not find these out, usually, because we try to make every single person say exactly the same thing on exactly the same

subject, and then we ask that every error made be corrected at once.

However, the "discovery" method is easy and pleasant and satisfactory. An essay or two at the beginning of the term, written, under no restrictions or limitations, on a subject chosen at will from a full list of well-considered subjects, will be of great value to the teacher. How? Each student will choose something that he is interested in; he will write himself into his essay,—his way of thinking, his limitations, his understanding of words, his use of sentences, etc.; every common deficiency, every excellence, will appear. When these pages are read it is as if a mirror were held up before the minds of this new class; one may read clearly what is there, and may discover what needs to be put there. During the reading, notes like the following, placed under the proper student's name in a note book, will be of the greatest value: A writes fluently, expresses himself often with too many words, avoids commas and even periods at times in his effort to make words keep pace with thoughts; B uses fair punctuation, never misses a period, and seems to understand or feel where a sentence naturally ends—his sentences, however, are simple and monotonous, the value of connectives being almost an unknown quantity; C's sentences are varied in form and pleasant to read,—his thoughts seem to come slowly or else he is afraid to express himself. And so on throughout the class. The note book forms the basis for further work and judgment.

After this first attempt at an essay the object of all writing must be, it seems to me, to focus all effort on one excellence and one error at a time, until the student himself begins to examine his own work critically and to know just what he must guard against. Very short themes are necessary at first. Time must be spent in thought and in careful scanning of expression, not in multiplying words. If the writing is all done in the class-room, the teacher can, by passing from desk to desk, induce this careful expression by calling personal attention to such points as transition from clause to clause or from sentence to sentence, the value of a long sentence as compared with that of several shorter ones, the use

of commas, etc. The whole object of the work in the first year will be to open the eyes of the boys and girls, first to their weakness, and second to the way to make strength come through weakness.

There are many ways of making this awakening a pleasure. Perhaps the class is reading Irving's Sketch Book. A student, not being satisfied with some sentence in his paragraph, asks the teacher for a suggestion. Knowing well where Irving is particularly good and simple in his sentence structure, the teacher may direct the student to a certain paragraph where he will find a variety of forms from which one may be selected. This is particularly helpful when one is working for easy transition or for a list of clause positions. After having been directed in this way and having found just what he wants, the student falls naturally into that best of habits in English study,—the looking to our good writers for guidance.

One will readily understand that this individual critical work will be aided and strengthened by class exercises in unity, variety, emphasis and transition. Anything that will strengthen the power of recognizing what is good, and making companions of several good things in order to choose the best, is valuable work.

One other suggestion may be made here. The reading aloud to one's self of what one has written helps greatly in gaining a critical mind. The voice seems to bring out little deficiencies that would otherwise escape us. Shall we allow this in class time? Certainly, if the class is in earnest. One who is trying to advance will be very careful of how he hinders others, and if he uses his voice while others are working, he will speak softly; the others, knowing what he is doing, will not be interrupted in the least. Only get students working for and interested in their own advancement, and silence or speech in class will regulate itself.

*Editorial*

THE Great West has been many times written about by Eastern people who have visited it. And much that lies beyond the Mississippi is still an unknown West to many who write. A month on the Pacific Coast, among teachers and in schools, will reveal a good many interesting facts; interesting in part, because surprising, and not less because of their significance.

Primarily, this section has had a generous constitutional and statutory recognition of free, superior and public schooling put into her several systems. As systems there are few better specimens of school legislation than may be found upon the Pacific Coast. Their houses are superior in both construction and appearance. Many of these have ample and choice equipments. Two normal schools visited are exceptional in this latter respect, among American normal schools. One state association has been attended by the writer, having 1,500 members present. Many—a surprisingly large per cent—of the teachers throughout the section, are college graduates. A larger proportion yet have had professional training. They constitute here a picked class. In the training of one corps of nearly two hundred teachers, thirty states were represented, and twice as many institutions. They are a vigorous body, alert, progressive, far better acquainted with what is going on in the older East than is the East with them and their work. In many respects one of the best equipped normal schools I know is a thousand miles west of the Mississippi. There is a sensible training, an excellent course, and a well-prepared body of young men and women.

Washington has an admirable state system, one that provides in a sensible way for all schools, but particularly for the weaker ones. Some of the older states might well profit by her example. Under the influence of this encouragement, high schools are rapidly springing up in all of the smaller cities and towns, and are being extended and equipped where they have before existed. Laboratories and libraries are growing. There is coming to be a closer articulation with the colleges and universities. These have given secondary education a sensible encouragement. Washington has now more than thirty high schools affiliated with its state university.

There is no need to write of education on the far Western coast in any apologetic terms. The interests of these states are identical with those of the older sections in all important respects. They are work-

ing at the same social and civic problems, and the public has not a variable faith in the wholesome influence of a sound and generous schooling.

THE life of the late Herbert Spencer, whose passing has been one of the world's distinct losses in the past month, is full of lessons for those engaged in any earnest work. His achievements illustrate the magnificent possibilities of a purely intellectual career. Mr. Spencer blocked out his life-work consciously and deliberately from the beginning, and held himself to the self-appointed task until he had made a record as one of the most, if not the most commanding intellect of his age. And what an age it was! How full of intellectual giants! The names of Gladstone, Kingsley, the Arnolds, Tennyson, Darwin, Huxley, the Brownings, Dickens, Thackeray, Ruskin, Carlyle, Macaulay, John Stuart Mill, and of Victoria herself, spring to mind as among the transcendently bright lights of the Victorian Age; all stars of the first magnitude, making this the most splendid age in the world's history. Herbert Spencer wrought originally, in his own field. His system of synthetic philosophy is the most fully rounded and strictly logical ever put forth by any thinker. His contributions to the science of government and the philosophy of society and of nature are of immense consequence to humanity. And yet he never had a university training. He was not directly indebted to the schoolmaster. His method was not academic. Possibly he would have been even greater had he not in a sense despised the things that are sometimes counted the indispensable conditions of true scholastic greatness. But his career furnishes one more illustration of the truth that a man is worth more than a system, a free spirit working out its destiny in conscious mastery and royal supremacy over all material conditions and environments—this is the greatest spectacle furnished by the continuous drama of history. The thought has many applications. In the school the teacher's individuality is of more consequence than any particular qualifications or prescribed preparations. The personal equation is far above the mere educational theory or program. Mr. Spencer was a long time in winning recognition. Publishers refused to take the risk of publishing his writings, and he spent large private sums in issuing the results of his laborious investigations. Like all original workers, he aroused many antagonisms. Doubtless his theories are more or less pregnable. But after all allowances have been made, his name and work will remain inseparably associated with a significant evolution of human thought which has made distinctly for a better understanding of man's presence on earth and his ultimate destiny.



ONE of the best manifestations of the spirit of the "new education" is the marked extension of the sphere of influence of the schoolhouse, in both city and country. Open all the time and useful to all classes of citizens is coming to be the popularly accepted ideal for the school building. Its use for the class-room instruction of the young will probably remain its first and principal one; but when the day's recitations are over why should it not become the center of the social, intellectual and civic life of the neighborhood?

There are still a few people, especially in the smaller country towns, who cannot get used to this new idea and who contend that the town officers have no right to open the building for any purpose save class instruction. A favorite objection of such people is that if permission is given at all it must be given to every applicant, no matter what the character or purpose of the proposed gathering. It is sufficient to reply that the matter can be safely left in the care of an intelligent committee, who can exercise the same discretion that every man exercises in relation to the guests whom he admits into his own house. Because he admits his neighbor or his friend he is not under obligation to admit a burglar or a tramp. The citizens, having paid for the school building, surely have the right to say how it shall be used. We think the time has gone by when any earnest body of responsible people could not easily get permission, by vote of their fellow-citizens in open town meeting, to use the schoolhouse for such purposes as those usually had in view by the school associations which are so rapidly (and happily) multiplying in various parts of the country. These associations for the cultivation of a true civic spirit, the fostering of correct educational ideas, the development of intelligence and a pure and helpful social life, are proving of untold benefit to our country. As they still farther multiply we look to see them federated for mutual growth and helpfulness. They are at once a cause and a symptom of the new educational consciousness of our people.

THE real test of a teacher's ability is found in the progress of the dull pupils. Yet few investigating parents or committees are allowed to know much about this even where there is anything to be known, and in a large number of cases so little special and intelligent work is done with the dullards that there is nothing to be shown to an interested visitor. • On all show occasions only the brightest pupils are brought forward and the deficiencies in the teaching are discreetly smoothed over. Where a pupil is bright and well qualified in one study and backward in another, he is too often allowed to show off in

the line of his strength and to become more confirmed in the weakness of his deficiencies. Probably there are few educated people who cannot look back and see in their own experience errors that were tolerated in their early educational years that might easily have been eradicated, but which, being tolerated, have handicapped them and lowered the average of their culture all through life. Among grammar and high school, and even college graduates, there are mathematical cripples, linguistic blunderers, ears deaf to all harmonies, voices incapable of anything but discord, hands unable to draw a straight line from one point to another, imaginations wholly dormant, reasoning faculties absolutely deficient in all logical acumen. These inabilities combined in one individual would, of course, make him an idiot. But singly they are all too common. There is a touch of idiocy in very many presumably well educated people which might easily have been eradicated by thoughtful faithfulness on the part of earnest teachers and parents. It is hard to concentrate effort in the class-room on the line of greatest resistance. It is pleasanter to push ahead with the bright minds who least need our care and attention. It is far more gratifying to our vanity to show off at examination and exhibition time the ninety or one hundred per cent pupils. But there is really a far greater honor, a much profounder satisfaction and more permanent reward for the thoughtful and conscientious teacher who succeeds in bringing up a fifty per cent boy to a seventy-five or eighty per cent average. And the best school is the one whose graduates display in after life the evidences of a well-balanced, all-round culture.



### Foreign Notes

#### CONTRAST BETWEEN GERMAN AND FRENCH SECONDARY SCHOOLS.

The October number of *EDUCATION* presented a brief epitome of an article by a French *savant*, M. Da Costa, on the historic development of German pedagogy. In this article, which is introductory to a detailed study of his subject, the author maintains that the animating principle of German national education is an exalted patriotism. This principle explains, in his opinion, the recent movement away from idealism and toward utilitarianism; a movement which culminated in the famous conferences of 1890 and 1900, and the resulting modifications of the secondary programs, that is, the programs of the *gymnasias* and the real *gymnasias*.

In a subsequent article M. Da Costa confirms his position by citing the corresponding views of well-known German professors. Thus, according to Professor Rein, "world culture" is something much too vast for the ordinary comprehension. It is only when the pupil is made to enter into the current of national life that his mind is properly nourished. For this reason "the analysis of the circle of German thought affords the only standard applicable to the national education." The study of literature, for example, "has no significance unless it is closely related to the history of the national literature." In the same spirit Dr. Jager, director of the gymnasium, Frederick William, at Cologne, says, "The teacher should have a spirit so completely patriotic, so entirely national, that he is not even conscious of the fact." For the most part also, according to M. Da Costa, this intense national feeling centers around the events of 1813 and of 1870, so that it excites a military fervor in the rising generation. In common with Mr. Sadler, who has also made a profound study of the German national education, M. Da Costa notes its wonderful adaptation to the work of unifying the entire body of the educated classes in the country.

In this respect the German secondary system has an effect exactly opposite to that of the French secondary system. The latter is a disintegrating rather than a consolidating influence. The passage in which these distinctive tendencies are set forth may well be quoted here in full, as it throws light on the two most highly organized systems of national training that have developed in the modern world. "Viewed from the practical standpoint," says M. Da Costa, "the chief characteristic of German education is seen to be its admirable adaptation to

the masses. Everything about it, even the slightest detail of its material organization, discloses a remarkable spirit of equality, a constant care for the formation, not of individual units, but of collective bodies armed for practical life. Strange as it may seem, the German school (reference is here made to the secondary school) is a model of democratic organization in the best sense of the word. Between professors and pupils, and between the pupils themselves, there reigns an admirable spirit of unity, of solidarity; in this respect it must be recognized that the German school realizes fully the ideal aim of a school, namely, that of offering a natural passage, a gradual progress from the narrow collectivism of the family, to the larger collectivism of the state. In respect to the domain of the school, and possibly also in respect to other fields of action, we are, as compared with the Germans, veritable aristocrats. We form *elite* classes to the detriment of the masses, and many of our scholastic institutions are specially adapted to accentuate intellectual differences, to create divisions, and thus to favor a mental disposition which does not promote social unity; or, to put it in another form, in our country the school often fosters, side by side with economic conflicts, intellectual and moral conflicts which are dangerous, if not to the order, at least to the harmony of society. It is altogether different with the German school; this institution, without passing beyond its own sphere, seeks to realize as fully as possible the unity, the solidarity which should eventually extend to all the members of the state. For this purpose it employs a successful method, which consists in raising by the same effort all the minds of one class to the highest average possible. Take any German class whatever, you will find there without doubt some scholars particularly talented and some incapable; but nevertheless you will never observe there the sharp distinction which is made between the famous head and the not less famous tail of a French class. It will often be found that the best scholars of the German class are inferior to the best of a French class, but on the other hand, as a rule, the general average of the former will be higher than that of the latter. I have many times made this observation to a German professor as we passed out of the classroom, and almost invariably the answer has been, 'We do not wish to form an *elite*.' Such an effort in a gymnasium would be wrong from a moral standpoint, because it attracts toward a small number, and by a sort of unjust privilege, the interest of the professor, which is due to the whole class; but more than this it would be even worse for the state, which, in order to sustain itself in the competition with other nations, must have the united efforts of all those who are educated. Now in this competition victory is won not by numbers alone, nor by intelligence alone, but by the judicious combination of both."

"The management of a German class," says M. Da Costa farther, "is always strictly subordinated to this principle. Hence, nearly always oral exercises or recitations have preference over written. Now one of the principal advantages of the oral exercise is that it enables the whole class to participate in a common work; for the same reason this class exercise ought to be of average difficulty, and directed rather to the development of the qualities of promptness, decision, and the practical utilization of materials within the mastery of all the pupils upon the simple condition of industry and effort than to the qualities of originality and personal reflection, which are better cultivated by the written exercise."

This view of the oral class exercise as a means of the participation of the whole class in the efforts of each member has been repeatedly emphasized by Dr. Harris, and is generally approved by American teachers. It is interesting to find it confirmed by an acute student of foreign school systems and methods. The study of German pedagogy from which the above citations are made<sup>1</sup> well deserves the attention of all persons interested in this field of inquiry, and may with profit be read in connection with Dr. Sadler's discussion of the "Unrest in Secondary Education in Germany and Elsewhere,"<sup>2</sup> which has many points in common with the study here considered.

NOTES.

The Superior Normal School (*École Normale Supérieure*) at Paris has been reunited to the University of Paris by a ministerial decree, which does not go into full effect until November 1, 1904. By this measure this famous institution is invested nominally with the full university rank which it has always held by its actual work.

The total number of students matriculated at London University the present year is 2,901 as against 1,917 in 1900. Owing to the modern character of the University there is noticeable a tendency among the graduates of Oxford and Cambridge to read for a London degree.

A. T. S.

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1. *La Culture nationale dans l'enseignement secondaire en Allemagne*, by M. Da Costa. *Revue Bleue*, July 18 and 25 and August 1, 1903.

2. Published in Vol. IX of the special reports issued by the Division of Special Inquiries and Reports, Board of Education, England.

## *Book Notices*

**NOTE.**—The number of books now published monthly is so large that we shall hereafter adopt the plan of promptly acknowledging by title, author, publisher and price, all books sent us for review; and later, as space is available, give more extended notice to such as seem most likely to be of interest and value to our readers.—PUBLISHERS EDUCATION.

**Hazen's Elementary History of the United States**, published by The Morse Company, 31 Union Square, New York City, mailing price, sixty cents, is a simple, complete story of our country, adapted for study and reading. Biography and history are so woven together that each helps the other to instruct and interest the children and to bring out the important events on which the life, growth and prosperity of our nation depended.

The plan is new and striking. Each topic is treated by itself as far as possible, which gives a complete view of each period of our history. A view of the world in the fifteenth century prepares the way for the "First Period of Discoveries and Explorations," which covers the stories of Columbus, Cabot, Hudson, and others. Then follows the "First Period of Settlements," in which the stories of the various colonies are pleasantly told, the life, modes of travel, customs, and habits are made prominent, as well as the form and development of our Government, the prominence of English settlements explained.

The different parts are so connected that they naturally follow one another. Thus each period of discovery and exploration leads to settlements. The story of the colonies prepares the way for the Revolution. The story of slavery leads up to secession, etc.

In order to do away with excessive memoriter work and at the same time to give a clear, complete, and lasting knowledge of our country to the pupils, an outline at the top of each page forms a skeleton of what the page contains.

There are nearly three hundred beautiful and instructive illustrations, all original and prepared especially for this book.

A new and striking feature is the full pages of flags showing in colors our earlier colonial flags, with the development of "Old Glory" and our naval flags.

The publishers offer this history to the educational public as a great advance in methods of instruction, and believe that the plan and its execution will meet the approval of our most advanced educators.

**Novello Music Course: Graded Sight Singing Melodies for Blackboard Use.** Primer, First Reader, Second Reader and Third Reader. By Francis E. Howard. Teachers and pupils who use the "Novello Music Readers" are to be congratulated. We do not know of another collection containing so large a number of beautiful songs for children. The Readers are remarkable for the great number of excellent composers represented, for the bright and attractive character of the music, and for the skill which the author has shown in keeping the two and three part songs within the easy compass of young voices. He evidently believes in giving to children music with inspiring melodies, and when these are set to such rich harmony as is found in most of the numbers, their growth and interest in music is assured. No school board placing the Novello Course in the hands of competent teachers can fail to have the satisfaction of seeing the pupils grow in their love for good songs and in their power to inter-

pret them. We hope that Mr. Howard will make a collection of longer selections for the highest grammar grade or high schools. The choruses should be fairly easy, and not heavy, but such as he thinks suitable for young voices. One half of the book should be arranged for unchanged voices and the other half written with a bass clef. A series of charts for the three Readers, illustrating each new rhythmic and harmonic element contained in them, would be a great aid to the average grade teacher. New York: Novello, Ewer & Co.

**Money, Banking and Finance.** By Albert S. Bolles, Ph.D., LL D. Dr. Bolles has performed a work so long needed and so acutely desired that the wonder is that it has not ere this been put forth. His book is the pioneer of its kind. The author states that it is designed especially for three classes of readers,—those that intend to devote themselves to the business of banking, those who are thus engaged, and those who are studying the history and theories of banking. A careful reading of the book demonstrates that one other class may well be included in this category, to wit, those who have anything to do with banks, either as depositors, borrowers, or lenders. The information is so extensive, so practical, so substantial, that everyone, be he banker, broker, business man, or professional, must needs for the sake of the knowledge the book contains and for the protection the book proffers read and study the book. Dr. Bolles' chapter-headings will disclose the subjects treated,—classification of banks, utility of banks, how a bank is organized, shareholders, bank circulation, deposits and depositors, loans, negotiable paper, duties of the various officers of a bank, how the reserve is kept, creation and utility of savings banks, depositors, and the law relating to the payment of deposits, loans, trust companies, private banking, bank finance, and railway finance. These are some of the topics considered in the book, which is a veritable storehouse of information regarding banks and their methods and uses. For commercial schools and high schools having commercial departments this work will be of inestimable value, while for the officers of banks and stockholders thereof it is a handbook of unquestioned authority. The business man will find it a valuable aid, and the professional man will save himself many errors and much confusion by owning and relying upon this most serviceable work. We give it our most cordial endorsement. American Book Company.

**Short History of Mexico.** By Arthur Howard Noll. This is a new edition of a little book that has had a cordial response from the reading public. The author pays particular attention to the efforts made throughout the nineteenth century toward the establishment of a constitutional government in Mexico. It is an authoritative work on the subject, and is sufficiently condensed to encourage the reader to read carefully the whole volume. A. C. McClurg & Co. Price, 75 cents net.

**Greek Lessons.** By Frederick Stillman Morrison and Thomas Dwight Goodell. This is for beginners in Greek, and is designed to guide them to a knowledge of the language through the grammar, the authors believing that the use of the grammar is indispensable from the very first lesson in Greek. The exercises are carefully graded, and specially prepare the student for taking up the study of the *Anabasis* with a good working knowledge of the grammar. The work has many excellencies which will commend it to all teachers of Greek. D. Appleton & Co.

**A History of Modern Europe.** By Merrick Whitcomb, Professor of History, University of Cincinnati. The period considered lies within the time of the Renaissance and the present day, with the greater emphasis placed upon the contemporary period. In this the author departs from most of the school histories now in use; the growing world-interests of American students and peoples demand that greater attention be given to men and events of recent times than to those of hoaried past. The expansion of the nineteenth century requires a corresponding contraction in the earlier centuries, and it is well that it is done. Dr. Whitcomb has a virile style and presents his facts and deductions fearlessly and honestly. D. Appleton & Co.

**German Grammar.** By Marion D. Learned. The author believes there is need for a new grammar and on his belief has constructed a text-book which differs in many particulars from the ordinary grammar. In arrangement, exercises, vocabulary, orthography, and terminology the changes are decided innovations and are such as will commend themselves to teachers of German. Substantial and frequent exercises accompany every new principle of the grammar, and the student must make thorough progress when using this text-book in acquiring a systematic knowledge of the principles of German and a wide range of vocabulary and idiom of modern German. D. Appleton & Co.

**Beginnings of Rhetoric and Composition.** By Adams Sherman Hill, of Harvard University. Dr. Hill's book is a model of clearness and accuracy; it is stimulating and vigorous, replete with graphic directions and illuminating illustrations. The author teaches young writers to express themselves correctly, not by dry mechanical devices, but by inciting them to put their natural selves into their compositions. The book aims to remove the obstacles that lie between what they think and what they write. It lays stress on correct rather than incorrect forms, and on better rather than on worse modes of expression. It is a most valuable addition to Dr. Hill's series of text-books on the English language; its use means surer thinkers and clearer writers. It is altogether the best book of its kind. American Book Company.

**Fabulæ Faciles.** Edited by John Copeland Kirtland, Jr. Ritchie's famous first Latin reader has been prepared for use by Professor Kirtland, who has made several changes in the text; long vowels have been marked, the orthography of Latin words has been brought into conformity with the practice in our schools, and the text made to approximate more closely to our rather strict notions of the standards of model prose. The notes are entirely new, and are suggestive rather than technical; there are no references to the grammars. For a first Latin book the *Fabulæ* will be found to be a valuable introduction to the classic prose. Longmans, Green & Co.

**Hero Stories from American History.** By Albert F. Blaisdell and Francis K. Ball. This is designed for use in the fifth and sixth grades of elementary schools as a supplementary reader to the history text-book. The stories are thrillingly told and give color to the dry recital of historical facts in which the text-book abounds. The authors have made judicious selection of graphic events and their style is admirable and gripping. It is abundantly illustrated with cuts especially made for the book. Ginn & Co.



**First Lessons in United States History.** By Edward Channing. This is a well written, readable history for the lower grades that may be used either as a text-book or supplementary reader. Professor Channing's style is graphic and he seizes the salient points of our history and makes them interesting and forceful. The book is embellished with six full-page colored illustrations and many line cuts. The Macmillan Company.

**Anthology of English Poetry.** By Robert N. Whiteford. The book contains poems from Beowulf to Kipling, and is designed for use in secondary schools, colleges and general literature classes. The poems selected are for the most part those that have been classified as the masterpieces of English poetry, and these are linked together by notes and quotations calculated to make pupils susceptible to philosophic and æsthetic criticism. Its use in schools for loving, systematic study of poetry will go far to waken a continuing interest in "thoughts that breathe and live." Benj. H. Sanborn & Co.

**Conquering Success; or, Life in Earnest,** by William Mathews. Mr. Mathews is probably best known as the author of "Getting On in the World," a book which, on its publication thirty years ago, scored an extraordinary success. "Conquering Success," also addressed to young men on the threshold of life, is written with all the author's old-time earnestness and enthusiasm, and is equipped with a wealth of anecdote and example, which makes it an unusually interesting as well as a very helpful book. Houghton, Mifflin & Co. Price, \$1.50.

**Barbe of Grand Bayou.** By John Oxenham. It is refreshing to read a love story the scene of which is laid in the circle of the lowly instead of in "society." This tale is one of the dramatic experiences of two humble peasant folk, who had all the romantic human passions and adventures that are sometimes erroneously supposed to belong only to the "four hundred." Barbe, Pierre, Gaudriol, and Alain are strongly drawn and interesting characters. In the last half of the volume the author gives his imagination free rein, and taxes severely the credulity of the reader. But, nevertheless, the book is thoroughly readable, and leaves a pleasant impression upon the mind. New York; Dodd, Mead & Co.

**The Moth Book.** By W. J. Holland. This is a magnificent volume, elaborately illustrated with full-page color plates and numerous wood cuts. It is intended as a popular guide to a knowledge of the moths of North America. It is a companion to Dr. Holland's "The Butterfly Book," which practically revolutionized the study of this most interesting and beautiful class of insects. The moths of North America are very numerous and beautiful, and also are of great economic importance. Such subjects as The Method of Collecting Specimens, The History of Silk Work Culture, The Life History and Anatomy of Moths, The Best Methods of Preventing the Ravages of Destructive Moths, etc., are considered. The work is practically exhaustive, dealing with the natural history and economic relations, the literature and bibliography of the moth. The type is large, and there are fifteen hundred photographs in the color plates, and three hundred text cuts. It is published at \$4, and is the latest addition to their well-known "Nature Library," by Doubleday, Page & Co.

**How George Rogers Clark Won the Northwest.** By Reuben Gold Thwaites. This is a collection of essays on the history of the Middle Northwest,—Ohio, Indiana, Illinois, Michigan and Wisconsin. The narrative ranges from the early days of the French fur traders, who loved their pipe and bowl and fiddle, through the British conquest of these peaceful people and on through the American conquest of the British. The division of the Northwest into states and the Black Hawk War, the last Indian uprising in that region, complete the narrative. There is added an account of the collecting of valuable data of this Western history, left in manuscript by Lyman Copeland Draper, the collection having now become famous. The book is an interesting and instructive contribution to the history of that part of the country which is necessarily more meagre in records than the Atlantic States. Chicago: A. C. McClurg & Co.

**The Pope Bicycle Daily Memoranda Calendar.** The reissue of the Pope Bicycle Daily-leaf Calendar may be considered the opening gun proclaiming the natural and healthful return of bicycling. Col. Albert A. Pope, the founder of our bicycle industries and the pioneer in the Good Roads Movement, is again at the head of the bicycle industry. Upon the three hundred and sixty-six calendar leaves are freshly written lines, from the pens of our greatest college presidents, doctors, clergymen, statesmen, and other eminent men and women, all of them enthusiastically supporting bicycling. Half of each leaf is blank for memoranda. This calendar is free at the Pope Manufacturing Company's stores, or any of our readers can obtain it by sending five two-cent stamps to the Pope Manufacturing Co., Hartford, Conn., or 143 Sigel Street, Chicago, Ill.

**A Handbook of Modern Japan.** By Ernest W. Clement. The character of old Japan, the wonderfully rapid changes in fifty years, and the resulting new Japan are portrayed in this book with attractive skill. It is evidently a faithful account and clear analysis of conditions, public and private, of personalities, physical, mental and religious, of the Japanese people, and they are those which the general reader most wishes to know. All are treated with a detail which gives an immense amount of information, but with a vigor which prevents weariness in the reading. When one has finished there remains in the mind a vivid picture, as of a panorama, of Japan passing from the old conditions to the new, in rapid on-going. It is a good book to have in the home for reading, and to keep on the shelves for reference. Maps and illustrations are abundant, and there is a valuable bibliography of English literature, and also Japanese and French, concerning Japan. A. C. McClurg & Co., Chicago.

**Genetic Psychology for Teachers.** By Charles Hubbard Judd, Ph.D., Instructor in psychology at Yale University. This is a late volume of the voluminous and most excellent International Series, edited by Dr. William T. Harris, and published by the Appletons. The material of the book has been drawn from original sources of experimental psychology. This is almost a modern science. At any rate, under the influence of Charles Darwin and the late Herbert Spencer the science has been revolutionized. The present volume is thoroughly up-to-date. It is the work of a scholar of the first grade, and will be welcomed by all students of pedagogy as well as of the general subject of philosophy. Included in the book is a telling criticism of Colonel Parker's method of teaching arithmetic. We find the book fully up to the high watermark of the other books of this series. D. Appleton & Co. Price, \$1.20 net.

**Select Statutes and other Documents Illustrative of the History of the United States, 1861-1898.** Edited with notes by William MacDonald. This book opens with the call for 75,000 volunteers in April, 1861, and closes with the Treaty of Paris, December 10, 1898. Every intelligent person will recognize the great importance of the period of history covered by these dates. The most important documents of the period are selected by the author and here presented in full, or such extracts made from them as will give a clear idea of the purport of the same. As a reference book it will be exceedingly useful to careful students of our country's history, and will make easier the systematic study of the period of which it treats. The Macmillan Company. Price, \$2.

**New Fortunes.** By Mabel Earle. This story is strong in its large atmosphere of Western nature and healthful human character. The pictures are vivid with the steepness of the cañons, the purple of the great mountains, and even the odor of the sage brush, which takes its part in suggestion of the grandeur to which it belongs. The human nature is full of the sweetness of home life, mixed with the stronger qualities. The bravery of the girl heroine is not the mere momentary courage of occasional crises. She has that, magnificently, but it is based on the deeper bravery of every-day living, which meets the commonplace hardships and conquers them with as sure an aim and as steady a heart as that with which she brought down with her gun the marauding bear. A. S. Barnes & Co., New York.

**Nerves in Disorder.** By A. T. Schofield, M.D. This new book aims to dispel ignorance regarding all functional nervous diseases and to set forth scientific principles for successfully treating these troubles, not only by physicians but also by the sufferers themselves. He shows how to find out the causes of this wear and tear of the nerves; cites many cases of sufferers; explains many cases of remarkable cures. In regulating the economy of health, in attaining the even balance between body and mind vigor, in avoiding, checking, or curing all forms of nervous troubles, this work will be found invaluable to both physicians and laymen. To teachers it will be a suggestive and helpful work; it will save many a doctor's bill and prevent many a breakdown. Funk & Wagnalls Company.

**On the Storied Ohio.** By Reuben Gold Thwaites. This book is just as good reading as it was under the name of "Afloat on the Ohio," when it was first published in 1897. It is an account of a row-boat voyage made by the author throughout the entire length of the Ohio, and he brings most interestingly to mind the historical events that happened on the banks of the river. The book is a valuable addition to popular American history, and will serve admirably as a guide to writers who may be tempted to do a similar work for other historic streams. Several excellent modern photographic views of the Ohio River accompany the text. Chicago: A. C. McClurg & Co., 1903.

**The Silent Maid.** By Frederic W. Pangborn. This brief tale is evidently of German origin, and the author has done hardly more than translate the rhythmic measures of the original into the form of prose. The poetic form is discernible all the way along. The story may be useful in stimulating the imagination, but it "harks back" to an earlier age which is happily outgrown. L. C. Page & Co.

**Allen and Greenough's New Latin Grammar for Schools and Colleges.** Allen and Greenough's Grammar is so well known and has been so long before the public that any commendatory words of ours are unnecessary. Its high reputation has been sustained through a period of fifteen years. It is probably more generally used than any other Latin grammar published. The present work is a careful revision of the edition of 1888. This revision was planned and begun during the life of Professor Greenough, and has been carried out in accordance with the principles established by him. The arrangement has been improved, and the whole work brought into line with the more recent discoveries in the realm of philology. It will undoubtedly remain, as it has been, the standard of comparison for other Latin grammars. Ginn & Co.

**Macaulay's Life of Johnson.** Edited by Albert Perry Walker. For schools where preparation for examinations makes necessary the study of "Macaulay's Life of Johnson," Mr. Walker's edition will be found to be most serviceable through direct help and wise suggestion. The annotations are lucid and concise, and consist of tables, bibliographies, explanatory indices, list of periodicals and pamphlets, descriptive list of Johnson's works, Macaulay's life, notes, etc. The text is not edited to demonstrate the erudition of the editor, but to give the student every reasonable aid and suggestion to the end that he may gain an appreciation of the marvelous style of Macaulay and come to know somewhat of the subject of the essay. By the book the study is made pleasant, the end profitable. D. C. Heath & Co.

**Zoology.** By Buel P. Colton. This is a practical working book on the study of natural history. In a manner that is at once elaborate and vivid the author introduces the student directly to the investigation of animals, the grasshopper being the first considered. There is a striking absence of fine writing and exploitation of fanciful theories in the book, the dominant idea being to enlist the student's interest and attention at the very outset, and to carry this along with increasing power. The book is in two parts, the first treating of the descriptive features, the second of the practical. If there were no other studies in the curriculum besides natural history, and if the student had no divided interest in that study, he might well confine his attention to the observational and inferential study of animals, following the precepts of Agassiz; but with the crowded course of study in our high and secondary schools, and with the limited time at the disposal of the student to pursue the study of natural history, to demand of him that he shall make it a field and laboratory study is to ask the impossible and invite defeat. Yet for the most part, natural history text-books have been written with the distinct purpose of driving the student afieid to study and glean facts. The results have been deplorable; interest in the study has been at a low ebb, and for the most part it has been an unattractive study. It is only on the advent of such a work as Professor Colton's that a student can learn what can be really done by a course in the subject, studied along right and practical lines. The book teems with facts and explanations. It suggests that these be supplemented with those gained by the student by the use of his eyes and reason. The practical part of the book invites with searching questions and close analysis to fullest study compatible with the student's time and ability. Viewed in the light of a working text-book in natural history, it is one of the most satisfactory and sensible yet put forth. An examination will disclose merits most commendable. Boston: D. C. Heath & Co.

**The Modern Age.** By Philip Van Ness Myers. In the series of Mediæval and Modern History, Part II. This is a companion volume to the author's "Middle Ages." The book is intended as a school text for students of history who have begun with the history of Rome and Greece, and followed on with English history from the earliest times, through the Middle Ages, to the modern period. The cordial reception accorded the former work paves the way for a ready acceptance of the present volume. The author is a philosophical historian, for he notes the causes of the events studied and shows their connection with that which follows. The paragraphing is very helpful, the leading theme in each paragraph being thrown out in heavy face type, thus facilitating easy memorizing. It will be a very useful book in classes of history. Ginn & Co. Price, \$1.25.

**The High School Choralist.** By Charles E. Whiting. Mr. Whiting was formerly a teacher of music in the public schools of Boston, and is author of many text-books in music. He is abundantly qualified to make a song book for choruses in high schools, academies, musical associations, and the home circle. The drill exercises and solfeggios are admirably arranged, with distinct design to lead up to the difficult songs in the book. The music of the book is of the highest and purest order possible. Nothing of a meretricious or flippant nature has been suffered to find lodgment in the book; it is the brightest and best obtainable, altogether melodic and tuneful, and altogether singable. Among the musical authors represented are Dupont, Hatton, Abt, Smart, Moscheles, Denza, Booth, Arditi, Willemsen, Kinross, Arne, Geibel, and others. For the most part the songs are either new or have never been before arranged for school use. Mr. Whiting contributes a half dozen delightful and stirring compositions, songs that will find grateful acceptance in the schools. The book consists of a collection of dignified, expressive, suitable, and worthy songs, and is a valuable addition to the music course of high schools. Boston: D. C. Heath & Co.

We have received the following books for review in EDUCATION:—

*Kinder-Und Hausmarchen.* By Brüder Grimm. Edited by B. J. Vos. American Book Company.

*Elementary Geometry, Plane.* By James McMahon. American Book Company.

*A Practical Course in Spanish.* By H. M. Monsanto, A.M., and Louis A. Languellier, LL.D. Revised by Freeman M. Josselyn, Jr. American Book Company.

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## CONTENTS

|                                                                                                    |     |
|----------------------------------------------------------------------------------------------------|-----|
| Lessons in Genetic Psychology and its Relations to Modern Pedagogy.<br><i>John Ogden</i> . . . . . | 325 |
| Around London with Dickens. <i>Caroline Sheldon</i> . . . . .                                      | 333 |
| "February." (Poem.) <i>Elizabeth Porter Gould</i> . . . . .                                        | 339 |
| Defective Children and the Public Schools. <i>John T. Prince</i> . . . . .                         | 340 |
| At Midnight. (Poem.) <i>Helen Cary Chadwick</i> . . . . .                                          | 346 |
| Herbert Spencer's Essays on Education. <i>John J. Tracy</i> . . . . .                              | 344 |
| Economy in Teaching Composition. <i>Alfred M. Hitchcock</i> . . . . .                              | 348 |
| Physical Education. <i>F. H. Hain</i> . . . . .                                                    | 350 |
| The Program in Elementary Schools. <i>Principal Eben M. Spaulin, Ph.D.</i> . . . .                 | 361 |
| Some Factors of School Government. <i>Principal E. J. Crowder</i> . . . . .                        | 387 |
| Editorial . . . . .                                                                                | 376 |
| Foreign Notes . . . . .                                                                            | 380 |
| Book Notices . . . . .                                                                             | 394 |
| Periodical Notes . . . . .                                                                         | 395 |

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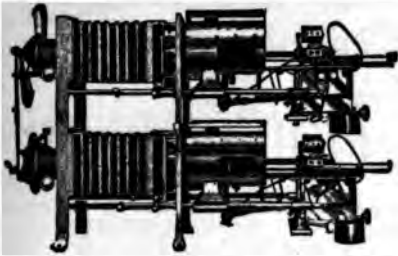
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In **EDUCATION** for March the opening number will be the first installment of a fine article on "Pedagogical Defects of the Sunday School," by Professor Frederick E. Bolton, of the Department of Education, State University of Iowa; Jean L. de Forest, M.A., Pompton, N. J., will consider at some length the subject of "The Education of Backward Children"; Supervisor George E. Crafts, Braintree, Mass., will contribute a very practical article on "Music in Home and School"; Professor W. Whitman Bailey, of Brown University, will write on "Sensation in Plants"; Principal Arthur Marvin, Schenectady, N. Y., will give some interesting facts concerning "Industrial Education in Europe"; Dr. John Ogden, of Minneapolis, Minn., will continue his series on "Lessons in Genetic Psychology and its Relations to Pedagogy"; and Miss Catherine A. Dole, Lebanon, N. H., will discuss "The Use of the Model in English Composition." These articles are of exceptional merit and with the Foreign Notes, Editorials, Book Notices, etc., will make up a valuable number of **EDUCATION**.

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In Towle and Jenks' new edition of Cæsar's Gallic War, published by the University Publishing Company, to avoid, in the commentary, the long lists of references to the various Latin grammars, inconvenient for the student's use, a syntactical appendix has been prepared, unique in character and practical in aim. The ordinary student does not carry his grammar with him; it is either at home or at school. Hence he often fails to look up the reference and learn the particular usage. He is also likely to be unable to make a discriminating use of the references. This appendix furnishes a *complete syntax of the Gallic War* in clear and compact form. Every construction is explained in the simplest manner and illustrated by one or more examples, usually its earliest occurrence in the first or second books.

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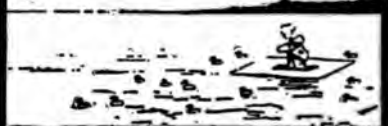
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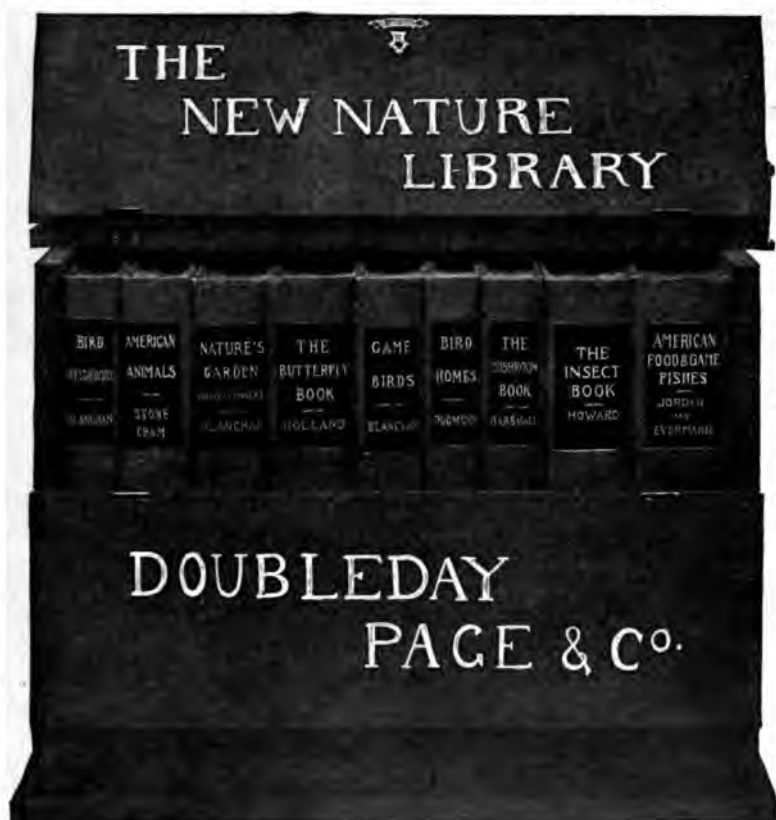
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## *Lessons in Genetic Psychology and its Relations to Modern Pedagogy*

JOHN OGDEN, LL.D., MINNEAPOLIS, MINN.

### I.



THE following lessons in psychology and pedagogy are largely the outcome of a course of lectures extending throughout the entire school year, given under the auspices of the Kindergarten Association of this city some four years ago. One object of these lessons or lectures was to show the vital connection between psychology and true pedagogy, and the simplicity and ease with which these two almost inseparable subjects may be learned when studied in the same connection: the one showing the mechanism of the human mind or what it is; the other showing the mind at work or what it can do; both are necessary to the right understanding of either one.

This association will stimulate students in these branches to exercise their own thoughts, feelings and volitions, making them the basis of inquiry,—to study themselves and their pupils as the best means of acquiring a true knowledge of these subjects.

A second object has been to encourage students and teachers to construct systems and methods of their own—systems of knowledge that shall be living things full of native force instead

of dead facts in heavy, unwieldy masses—systems, in fact, that shall be at once records of their own experience in thinking, feeling and willing, and a history of thought, origin and growth both in themselves and in those whom they may chance to teach, instead of the mere opinions of authors, however learned and good; for knowledge is not effective in any field until it takes root and grows in one's own mind, and bears original fruit for the benefit of others.

Another object has been to make nature speak, in terms of one's own experience, the truths that underlie all growth and human progress; for the whole realm of nature is but one vast field of living, breathing psychology, as it were, laden with the most soulful interest to the awakened human mind. Let that human mind grasp these truths and mould them into shape for original and practical use: original and vitalizing, since "that alone which has life can give life;" and practical, since that alone which touches the child's psychic nature, that which to him is a present, personal force, can be of genuine utility to him in the future. And that method alone can be effective which springs from one's original knowledge, fertilized and shaped into consistent system by original thinking and personal experience.

A half century's almost uninterrupted labor with teachers and kindergartners has convinced the author that much of the mere theorizing and lengthy disquisitions with which these subjects are hedged about may be dispensed with by the ordinary learner without serious detriment, if not in many cases with absolute advantage. The mind becomes embarrassed in a multitude of theories, which it fails to utilize in experience. The free play of original thinking is thus hindered by attempts to make one's thoughts conform to some one else's thinking or theory, which, in turn, may have been borrowed in like manner from a dozen authors of like merit (?). Sound, original thinking is a rare gift.

One of the best text-books in genetic psychology is one's own mind. This text-book is ever present with us. One may travel with it every day and sleep with it every night; may work with it, eat with it, and more and better than all, may think

with it and about it. The study of no other book will yield as handsome a revenue. No other will produce as thorough development of the whole man, soul and body, as the proper perusal of this book, accompanied as it should be with close introspection, and, if possible, with laboratory experimentation, though this latter is not always necessary; but surely the study of things themselves, especially those things that can be approached only by one's self, is far better than what authors may say about them, except as testimony of personal experience; and it is certainly more satisfactory than any amount of mere memorizing or verbal recitation from ordinary text-books. Hence a close analysis and description of one's own thoughts and the processes of thinking is the surest way to acquire a practical knowledge of the mind.

True originality and independent thinking are among the rarest acquisitions of modern scholarship. This lack of strong, vigorous, original thinking is doubtless the result, in part, at least, of profuse and labored explanations in our text-books, often more difficult to understand by the ordinary student than the thing or point to be explained. Especially is this the case in metaphysics, where the author attempts to do all the thinking, thus depriving the learner of the best part of study—the satisfaction of original conquest. The mind itself is better, both for thought and in thought, than any merely man-made book.

Again, close, concise and comprehensive definitions, if they are largely the product of the learner's own thinking, often throw a light upon the operations of the mind which one seldom experiences by the formal study and recitation of set lessons, where the effort is too often to make one's mind and thought merely to correspond with those of the author. Now good authors are good things to have, but good, close, original, vigorous, independent thinking is much better. Books and authors should be used only to help us think, not to think for us or to relieve us of self-help. They should compel us to think. The book that does not make one think vigorously away outside of its cover is scarcely worth reading or studying. Sometimes these books are an absolute hindrance to healthy thinking.

It is well, therefore, to put one's best thoughts into the shape

of sharp definitions for review and for ready use; otherwise they may escape. Every teacher, therefore, should write a book,—a book of original thoughts, condensed and crystallized into the smallest compass,—one's own experience made vital by close thinking, and subject to such improvement and growth as time may suggest. This book need not necessarily be published. That may safely be left to the next generation. But write a book for yourself, a living, growing book.

The following definitions, however, must be considered as merely tentative, since they are largely the product of the foregoing process—the united effort of a class of students put upon a course of independent thinking. The effort at first was a little awkward, but it soon became a source of great satisfaction and profit. The very effort on the part of most of them to construct definitions corresponding to their own experience, under the searchlight of close observation and introspection, made them more critical of definitions found in books. They soon learned that a definition in psychology that does not correspond with their own experience is comparatively worthless, and at best is valuable only as a door to the inner thought—the reality.

It will be found, also, when putting students thus upon trial for their best original definitions, that no two of them will agree in all points. This is what might be expected, since no two experiences are alike in all points, yet both may be correct in the main. It shows, too, the futility and even absurdity of trying to force an iron-clad definition upon the entire class, irrespective of natural differences in modes of thinking.

It must also be noted that there is a vast difference between thinking and merely remembering or calling to mind the thoughts and expressions of authors, or of the mere passage of thoughts through the mind. Thinking is the deep subsoiling of merely surface plowing; and the expressing of original thoughts is the harvesting of the rich crop of new thoughts engendered and grown from the deep planting of impressions in the rich soil of the mind and from the subsequent careful culture; while merely remembering and expressing the thoughts of authors is only making use of the old seed, soured and decayed it may be, or else its substance lost in the growth of the new

plant; and who of us would think of digging up the old seed potatoes, for instance, instead of the fresh, new ones for our delectation?

Good, sound reading, therefore, or study, is only remembering the thought of the author long enough, at least, to plant the impression therefrom. The rest is thinking—independent thinking and expressing or harvesting the new thoughts born, in this case, from careful introspection.

The thoughts of authors, therefore, whether given in books or discourse, can help us only by directing our attention inward upon this self-moving human power—the mind. We thus learn both its mechanism and its mode of action in thinking, feeling, and willing.

#### DEFINITION I

Thinking may, therefore, be defined : The employment of one's thoughts in a systematic and logical way upon some subject requiring and even demanding attention ; and it usually includes some of the various tints and shades of feeling and willing.

#### DEFINITION II

But to think implies a thinker, or a mind, which may be defined : That conscious agent of the soul (the self-conscious ego) that thinks and feels and wills. Hence its functions—thinking, feeling, and willing ; giving rise to intellect, sensibility, and will as forms or fields in which it displays its powers.

By giving due attention to the various processes of thinking we shall find that they may be briefly expressed in the following statements :—

#### THE ORIGIN OF THOUGHTS

All thought is the joint product of two co-ordinate, intangible forces, viz :

1. OBJECTIVE POTENCY, or the power material objects have to impress mind through the senses ; and

2. PSYCHIC ENERGY, or the power the soul has, through mind agency, to transmute and interpret these impressions, from whatever source, into concepts and conscious thought.

a. The first of these processes is called sense-perception, and is purely objective as to source ; the second is called

apperception, and is purely subjective as to source. (These two processes will be defined further on.)

*b.* It will be seen, therefore, that thinking is not carried on entirely within us. The forces that stir the mind and set it going are from the outside of us, or the mind. Environment helps us to think, just as moisture, heat, and light help the seed in the ground to germinate, and the plant to grow. And these questions in respect to the former will arise; viz., Are there any other original sources of thought? If so, whence and what are they? The class should decide.

*c.* All impressions upon the mind are made through or from the sensorium or seat of sensation, the nervous center of all impressions from the outside world. And the questions will arise again, Can there be any thinking done in a case where all the avenues to the outer world are closed? If possible, under what conditions? The class should decide.

*d.* The brain does not think. It is material—a part of the body—and matter cannot think. The soul or self has a mind that thinks, feels, and wills. They both have their living habitation in the human body during its temporary existence, and, doubtless, are reassociated in the spiritual body hereafter.

*e.* The brain and the whole nervous system are the media through which the mind during mortal life acts, the sensorium of which receives all impressions from without, whence sensations are transmitted to the hemispheres or cortical regions of the brain, where the gray matter by its disturbances shows the mind to be at work elaborating thoughts from material furnished by the sensorium.

*f.* This brain and the nervous system, in fact the whole human body, should be studied in order to understand the functions of the mind: indeed, both should be studied in the same connection because of their mutual relationship. We do violence to both by a needless separation even in study. And it may be further stated that the more perfect the organism through which the mind acts, especially the nervous system, the more perfect the action of the mind and forcible the thinking.



*g.* The body is provided with organs exactly suited to man's wants, each having appropriate functions by which and through which life is sustained and manifested. Most of these organs may be studied as the faculties of the mind are; viz., in a state of activity. They may be briefly outlined as follows, and, as before stated, their study should accompany that of the mind.

1. THE ORGANS OF LIFE, or those concerned in the food supply and preparation, as digestion, circulation, respiration, secretion and separation, deposition and elimination, naming, locating, and describing the several organs concerned in these processes.

2. THE ORGANS OF MOTION, or those concerned in the various voluntary movements of the body, as bones, muscles, joints, tendons, membranes, and other integuments, the skin included. Let these be located in the living body, and their functions described both at rest and in motion, in health and in disease.

3. THE ORGANS OF SENSATION AND THOUGHT, or those through which the various senses and the mind itself act, as the brain, its location, parts, form, material, and the functions assigned to each part, the kind of matter, etc., the spinal cord, the nerves—sensory and motory—their origin and use.

NOTE.—The above at first sight might appear to be a very brief course in physiology. So it is, and so it is intended to be; but it is more than is generally known by some of our best scholars(?). It will be found ample for ordinary purposes in the hands of a competent teacher. It is to be deplored that psychology and physiology are separated in study. The one is incomplete without the other; and a better practical knowledge of both can be acquired by associating them in less time than is usually devoted to one separately. The fact is, the true scientific and economic text-books for the millions, in all branches of study, are yet to be made. We have too many text-books by at least one half the present number.

As far as I am acquainted with those on these two co-ordinate branches of the same study, Mark Hopkins' *Outline Study of Man* approaches the nearest a genuine book for study. But it is not a text-book. Genetic psychology, as now studied, is another step in the right direction.

The mind is the agent of the soul. It is, as it were, the eye that sees, the ear that hears, and the hand that feels and does. The soul, therefore, thinks, feels, wills and does through this mind agent. As agent it is limited, at least in its present sphere

of operation, to a comparatively few faculties or powers, as perception, consciousness, memory, imagination, etc. (hereafter described). Lower animals have fewer still, until we arrive at a point in the scale of life where no appreciable percipience and probably no sensation exist, as in the vegetable world.

It is possible, however, nay probable, that these powers, and indeed all natural gifts, may be greatly improved, enlarged and multiplied in number and efficiency to the soul in another state of existence. And as the soul at present is supplied through the bodily organism with only five or six avenues to the external world, called the senses, in a future state it may have fifty, or five hundred, more or less, each one adding new pleasure and delight. God is good!

Whatever, therefore, the mind enjoys and suffers, the soul enjoys and suffers, since it is a necessary part of the soul, ever present with it, through which all the thinking, feeling and willing take place; and the bodily organism simply furnishes the avenues through which these powers are displayed.

The three grand functions of the mind are intellect, sensibility and will, as modes of activity. The mind is therefore a unit, acting in these three directions or fields in the process of thinking.

The intellect is the cognitive or knowing power. The sensibility is the sensational or feeling power. The will is the determining or motive power.

I. THE INTELLECT. The special powers of the intellect are:—

1. Perception and apperception, conception and intuition, called the presentative powers.

2. Consciousness, memory, imagination and phantasy, called the representative powers.

3. Understanding, judgment and reasoning, called the rational powers; all the above based upon the kind of knowledge produced by the action of the mind in these directions. The classification is more a matter of convenience than of scientific importance.

These powers will be fully defined and their application shown in the processes of thinking in a future number of EDUCATION.

## *Around London with Dickens*

CAROLINE SHELDON, MILLS COLLEGE, CALIFORNIA



VERY city, like every living being, has its own individuality, its characteristics, its "ways," that set it apart from all other cities. To an American this civic individuality is perhaps more marked in London than elsewhere. New York, Philadelphia, Chicago, San Francisco, hold the future of his race and country, but London holds his past; and this is true, even though he be of other than pure English descent. Paris is beautiful, clean, fascinating; along with Rome, Florence, Venice, Athens, and Berlin it presents much that is interesting in literature, art, and history, but, like these cities, it is essentially foreign. Unless one knows its language and its literature, and knows them sympathetically, he is always conscious of being an alien. He is surrounded by a chill atmosphere of criticism; and, whether he be the critic or the criticised, this atmosphere is a non-conducting medium, preventing close acquaintance, genuine interchange of ideas, and real enjoyment. But to the American putting foot for the first time in London, even—perhaps especially—to the American whose ancestors have for nearly three centuries lived and died in the New World, so that, as Lowell and Hawthorne have said, he can claim kinship with the very soil, and feels that he has roots reaching far down beneath the surface of things,—to such an American there comes a curious thrill as he realizes that at last he is really in London. Nor does this arise from his being in any sense an Anglomaniac. He may believe that the best country in the world to live in, now and henceforward, is the one whose ensign is the Stars and Stripes; but when he enters London, leaves the train at Waterloo Station, Charing Cross, or Paddington, rides up St. Martin's or Chancery Lane, and makes himself at home in Bloomsbury, he feels quite at ease, and says to himself, "Hawthorne was right; it is 'Our Old Home.'" When he stands under the dome of St. Paul's, among the tombs of Westminster, or in the corridors of Parliament House, he

seems to himself to have come into possession of another portion of the family estate, old, rich, beautiful, and his by indisputable right.

London is so composite—it holds so many cities within cities—that if one tries to study its history he becomes lost in a bewildering maze of fact and fiction about Celtic London, Roman London, Saxon London, London under the Plantagenets, the growth of her chartered privileges, the distinction between city and metropolitan regulations, and so on indefinitely—all of it interesting, but one must stop somewhere.

It occurs to the lover of books, the person who has not read the old poets and novelists merely that he may perform the modern duty of analyzing and dissecting them, but to the one who has browsed at will in poetry, drama, and romance for pure love of reading good things, that it would be pleasant to follow some of his favorite authors about from one to another of their especial haunts; and there are many who lend themselves readily to this sort of treatment.

Possibly among moderns there is none whom one can follow so readily and with so much satisfaction as Dickens. London is much changed since he walked its streets as boy and man, changed for the better in many ways because he once lived and wrote here; but it is still rich in memories of him, and many of the places where his men, women, and children lived and died will long remain as he knew them, because they are almost organic parts of the city's life.

Certain of Dickens' novels may be taken as a sort of prose epic, in which he relates the story of London life. There is scarcely a foot of the city as it existed in his day that does not live again in his pages. After wandering about the narrow streets of Bloomsbury, and certain others near the various Inns of Court, exploring Drury Lane and Soho, and making excursions to Camden Town, one feels, upon re-reading *David Copperfield*, *Nicholas Nickleby*, or *Oliver Twist*, as if he were standing upon the corner of a London street while the crowd passes by, and Dickens singles out here and there a man or woman and tells us of his struggles, triumphs, or failures.

After such explorations, too, one comes to the conclusion that Dickens must be acquitted of the charge of caricaturing the personages of his stories. They are all here, and he paints them to the life, and places them in that part of the city to which they belong. There are the beery-eyed, beery-voiced cabmen, the slatternly maids, the neglected children, the bargemen, and especially the lawyers of all grades. Of many of them one concludes that caricature would be impossible; nothing could be more whimsical than the reality. Some of the worst types that Dickens has described do not as a rule come under the observation of the foreigner or even of the resident in the better parts of London; but one who has walked from the Tower to London Bridge, along Great Tower Street, acknowledges to himself that possible Sykeses, Fagins, Quilps, and Riderhoods are all here.

Dickens knew his London thoroughly. He had learned his lesson by dint of bitter experience, through a neglected childhood, a struggling youth, an industrious manhood. His work, like all truly great fiction, is largely autobiographical. The sensation monger may invent his situations, his descriptions, even what he is pleased to call his human nature, but with the genuine novelist it is quite otherwise: his work grows; he observes, records, combines. This is no less true of the romanticist than of the realist. The extreme realist is a sort of photographer, who always carries about with him an intellectual camera, taking snap-shots at whatever comes in his way, with no attempt at re-arrangement. The great novelist takes the facts of human nature and human life, passes them through the alembic of his imagination, re-groups, re-combines, analyzes, compares, arranges, and re-arranges, till at last his picture is finished, and none the less true because of the treatment it has received at his hands.

It was by means of this process that Dickens gave to the world in his novels so wonderful a series of pictures of London life. His portraits of the aristocracy are always uncertain—he knew little of them in real life; but of the middle and lower classes he has prepared an immortal gallery of paintings.

It has been said of Dickens' child-characters, and said truly, that they are prematurely old, that their thoughts and language are not those of the children we know. But they are the thoughts and expression of the boy Dickens, and of others whose early experience with the hard, cold facts of life have made them old before their time. London streets show many old child-faces.

When one has arrived at the conclusion that Dickens has given an accurate picture of London, and sets about seeing the city of the great novelist, the first thing to do is to get a comprehensive survey of the various streets and quarters from the top of an omnibus. Merely reading the names on the lumbering vehicles as they pass is an unalloyed pleasure, not lessened even by the fact that one must search for some time among the advertisements of "Lipton's Tea," Cadbury's Cocoa," and "Beecham's Pills" for the modest announcement that the destination of this particular conveyance is Camden Town, Houndsditch, or Westminster Bridge Road. When one has climbed to the roof and secured a seat near the driver, however, the real happiness begins. A few coppers bestowed upon this worthy will bring out all the information of which he is possessed. This is usually limited; in many cases it is far less than that possessed by the passenger. But oftentimes the drivers do enter into the spirit of one's quest, and at the end of their respective "beats" pass one on to colleagues who also do their best to be helpful, and who make even two lone American women feel perfectly safe in going anywhere under their protection and guidance. Then, too, one picks up from them many a bit of choice Cockney dialect, precious for both diction and phrasing; and though a mere omnibus driver is doubtless far inferior to a coachman of the olden time, the glorious stage-coaching time, one receives help in realizing Tony Weller.

After thus exploring Camden Town, St. John's Wood, "Igh 'O'born," Clerkenwell, Mile End Road, the East Indian Docks, Islington, and many other localities dear to the Dickens folk, one should take a guide book, disguising its Baedeker red with a stout cover of paper or linen, and start out on foot. Much of the neighborhood of the Tower can be explored in this way; and there is always a good-natured and seemingly omniscient police-

man to answer questions and warn one away from dangerous localities. Here it is that one realizes the truth of Dickens' portraits of watermen, bargemen, and beggars.

Over in the Borough Road, beyond Westminster Bridge Road, one finds all that is left of the Marshalsea Prison—a single wall facing on St. George's churchyard. Hard by is the successor of the Tabard Inn, the very hostelry in which Sam Weller is first introduced to the reader of the *Pickwick Papers*. Millbank Prison, on the south shore of the Thames, has long since disappeared, and the Tate Gallery occupies very nearly its site.

The old warehouse where David Copperfield toiled in revolt against the ill-treatment of his stepfather has passed away, and boyish laborers are better treated now because this boy lived to tell their story.

Returning from the Tower, one may take a penny steamer to the Temple, and seek in Pump Court for some traces of Ruth Pinch, her brother and his friends. One may loiter along Booksellers' Row, picking up odd volumes of old British writers, and thence stray into Bell Yard in search of Mr. Guppy, Miss Flite, and Crook. One may go on into Lincoln's Inn Fields, and see at No. 58 the house which the study for Mr. Tulkinghorn is said to have inhabited. And one may believe or not, as he pleases, that the low-browed shop on the corner of Portugal Street is the veritable building inhabited by Little Nell and her grandfather.

If one goes for a ramble in "the city," there is a chance to find, in a little alley leading off Fenchurch Street, the tin sign bearing the legend "*Dombey and Son*," a somewhat startling object even to one in search of it. One looks about for Florence, Walter, or even Captain Cuttle; but they fail to appear, though several stout gentlemen, prosperous looking, with tall silk hats and heavy watch chains, pass, whose appearance suggests that among them might be found the elder Paul Dombey.

One lingers in the court of Staples' Inn to wonder once more just how Dickens intended to finish *Edwin Drood*, and however many endings one may have imagined for that story, remains unsatisfied that its author could not have lived to tell it for himself.

One goes back to Bloomsbury and the nest of hotels and boarding houses frequented by Americans, by way of Furnival's Inn and Gray's Inn, and so through King's Gate Street, in search of the house once inhabited by Sairy Gamp. There is no difficulty in believing that she lived here; too many of her family are still in evidence. Here, too, are originals for all the forlorn and dirty children that Dickens ever drew. One hears much of the Englishman and his bath-tub, but the dwellers in King's Gate Street are innocent of any acquaintance with the tub; the children here, one thinks, must be the dirtiest in the world. One knows their like is not to be found in the worst purlieus of Naples; for the Latin when he is dirty manages at least to be picturesque, while the Teuton succeeds only in being repulsively squalid.

The time that can be spent in studying the geography of London with Dickens for a guide is practically unlimited; and as an English friend said, "There are very few places where you cannot go with perfect safety even alone. Just walk along as though you were perfectly certain where and why you are going, confine your questions to policemen and 'bus-drivers, and never act surprised at anything, and you will be perfectly safe in all but the very worst quarters."

Whether the time spent in these explorations be long or short, in the end one concludes that, though Dickens is diffuse in style, and many of his situations forced and improbable, he has given us a true and vivid portrayal of London life and manners in the first half of the nineteenth century, and, further, that he served his generation well in calling attention to many abuses, and so causing them to be swept away. The "Old Bailey" still stands, but it has undergone many changes for the better; and if the spirit of the novelist sometimes revisits the scene of his earthly labors, he must rejoice over the destruction of Salem House and other schools of its kind, the disappearance of the debtors' prisons, and the transformation of the neighborhoods of Whitechapel, Seven Dials, and Drury Lane.

To those whose standard for the writing of fiction is the direct and, so far as plot is concerned, simple manner of



Balzac, Dickens must always remain unsatisfactory ; but for those who realize and frankly admit in Western literature the existence of two principles and methods—the classic, or simple and direct, and the gothic, or complex and involved—the novels of the great Londoner will have an abiding interest ; for these readers will recognize his kinship to the great cathedral builders, and will understand that he, like them, must not only build springing vaults and plan stained glass windows, but carve his monsters and his gargoyles. Such readers will recognize that the genius of Dickens is of the same kind, though infinitely less in degree, as the genius of Shakespeare and Dante ; in him, too, there survives something of the exuberant vitality, the luxuriant imagination, now delicate, now sublime, often grotesque, which marked the minds of the poets and dramatists of the centuries in and near the period of the Renaissance. Above all, will such readers realize, after a careful study of London even as it is, that despite his acknowledged shortcomings, Dickens could tell a story well and could make his characters live.

### *February*

How our pensive February loves the winter scenes !  
How fresh she keeps dear January's snows and evergreens !  
Her beads she counts, and each four years  
She finds there're twenty-nine.  
'Tis then she cries,  
With laughing eyes,  
" Now for the fun that's mine !  
Leap year parties,  
Sweet surprises,  
E'en proposal  
At girl's disposal—  
For there're twenty-nine !  
Heigh-ho !  
Twenty-nine !"

ELIZABETH PORTER GOULD.

BOSTON, MASS.

## *Defective Children and the Public Schools*<sup>1</sup>

JOHN T. PRINCE, MASSACHUSETTS STATE BOARD OF EDUCATION

**P**UBLIC school education is maintained for the sake of society and the State, as well as of the individual. It is at once constructive and preventive—constructive in helping to create high ideals and intelligence, and preventive in helping to hinder pauperism and crime. For the normal bodied and minded child the work of education is mainly constructive, and for this reason the duty of the State to foster education for that class, and even to make it obligatory up to a certain point, becomes evident to all. We see that it is a wise provision of statute law for the upbuilding of society and for the happiness and usefulness of individuals that every normal child shall be assured of a common school education. But if we keep in mind the need of the State to protect itself and the dangers to individuals of physical and mental degeneracy, we may see that the duty of the State toward abnormal or defective children is even more imperative than it is toward the normal or sound ones. It is incumbent, therefore, upon the State to provide means of education for all classes of children who are capable of education, and to provide care for all who are not. With a law upon the statute book making such education and care mandatory, it becomes necessary to define the means of carrying the law into effect.

It is said by good authority that from one to eight per cent of the children are what may be called abnormal children, *i. e.*, children who are defective either in body or mind so as to need special care or treatment,—the smaller per cent indicating the number of children who are feeble minded, and the larger per cent including the children who are abnormally dull. At present a good proportion of these children are either in the regular schools blocking the progress of others, or else they are

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<sup>1</sup> A paper read before the Department of Special Education of the National Educational Association in Boston, July 8, 1903.

outside the pale of the schools waiting to commit some crime before they can be brought to the notice and protection of the State.<sup>2</sup>

In general, there may be said to be two classes of defectives: (1) those that need scientific or institutional treatment, such as the feeble-minded, the blind and the deaf-mute; and (2) those whose education may, with some modifications, be conducted on lines similar to those of normal children, such as the dull or backward children, and those whose sight or hearing is but partially impaired.

Upon the assumption that the State must assume the education of the first class of children named, there will be three classes of institutions founded at convenient locations in the State—those for the blind, the deaf-mute and the feeble-minded. All of these institutions, with the exception of the non-educable portion of the latter class, should be conducted with the view of making their pupils self-supporting. Industrial or technical training of various kinds will therefore be a prominent feature of the education carried on in these institutions. As they are supported by the State, they will be free to all its citizens, and will afford accommodation and facilities for all who can profitably take the training offered. Attendance upon these institutions will be compulsory; that is, the State will assume the same authority over its weak subjects which it assumes over its sound ones, by obliging all defective children of a certain age who are not otherwise cared for to take the training it offers in one or another of its institutions. This should be done on the principle that it is the duty of the State to protect the child from the neglect of the parent or guardian. This principle of protection from neglect is to be applied to all classes of children. But in the case of mentally or physically unsound children there is an added reason for making education obligatory—the reason that has already been given for establishing schools for defectives—namely, that of the protection of society and of the State.

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<sup>2</sup>Dr. Edward M. Hartwell, of Boston, in a computation recently made for the writer, reports as follows: "1,384, or 0.324 per cent of the population of school age (5 to 15 years) in Massachusetts in 1895, were non-educable in the public schools; 384, or 0.09 per cent, were mentally defective, *i. e.*, insane or idiotic.

The State schools of which I have thus far spoken are for that class of educable defectives who need scientific or institutional treatment. They may be said to be a part of the public school system of the State, because they are free to all residents of the State, and are under the direction and control of the educational authorities of the State. The other class of educable defectives are those which should be educated directly in connection with the city or town public schools. This will be done by making of them small groups, and of placing over them skilled teachers, with the expectation that they will be treated for the most part individually and with special ends in view. In cities or large towns in which there is a sufficient number of defectives to form into groups, the plan would be simply to separate the pupils of school age—say from seven to fourteen—into groups of ten or fifteen, and place the groups in convenient localities. If the number to be trained is large enough, there should be a classification according to attainment and capacity; but it should be understood that the treatment of this class of pupils will be chiefly individual. The experience of Providence, R. I., and other cities with the schools of weak-minded and backward pupils shows what can be done with a class of children whose neglect means degradation and crime. So great is the menace to society of a continuance of this neglect, that the State is justified in obliging towns and cities to properly train in special schools all abnormal children who do not need the institutional treatment of which I have spoken. For the cities and large towns this will not be a difficult matter, as has been shown by experience. For country districts provision may be made for carrying the children to a central school, or for establishing small home schools in convenient localities. These schools should be under the charge and superintendence of the local public school authorities. In states like Massachusetts, where district supervision prevails, the schools may be under the direction of the superintendent and district committee, the expense of the schools being borne by the towns from which the pupils come. In country districts whose unit of government is the county, the schools may be organized and controlled by the county board and county superintendent, and the expense of carrying them on will be borne by the county.

It is then, to summarize what has been said in this paper, both right and feasible for all educable children to be included in the scope of the public school system, and to share in its benefits and its obligations. It is also right and feasible for the State to place all educable children of a certain age under the statutory requirement of compulsory school attendance to the end of giving all its citizens the benefits of intelligence and self-support, and of guarding itself and society against the dangers of ignorance and crime.

*At Midnight*

Steeped in the stillness of the moonlit hours,  
The radiant night wears out. No eye seems oped  
To trace the penciled tree-shades on the snow,  
Or note the dropping diamonds of the stars.  
Wrapped in mysterious arms from out the void,  
Earth holds her joyous course. The very air  
Quivers with songs of love, unheard, but felt.

HELEN CARY CHADWICK.

MALDEN, MASS.

## *Herbert Spencer's Essays on Education*

JOHN J. TRACY, LA SALLE ACADEMY, PROVIDENCE, R. I.



HE translator of *Emile* seems to be correct in his judgment when he places Spencer's *Education* among the three best classics in matters educational that have appeared in the world from Plato's *Republic* to the numerous works on education that in our epoch are yearly coming from the press. Mr. Payne would have done better still had he put in the very first rank of pedagogical literature the contribution thereto from the hand of Herbert Spencer; because, unlike the *Republic*, the *Four Essays* deal directly with education, and, unlike *Emile*, nearly all of what the Englishman advances is practicable, and meets with the approbation of educational theorists and practitioners alike. I say nearly all because there are some positions taken by Spencer that are quite untenable. They will be noticed in part and briefly throughout this little review. Again, not all the plausible theories of education, presented so charmingly by Spencer, are the product of his own unaided thinking. On the whole, however, this work of Herbert Spencer deserves, in my opinion, the first place among educational writings.

More than forty years ago Spencer phrased his conception of the aim of education as preparation for complete living, and to-day the greatest authorities in the theory and practice of education,—men like Pres. Nicholas Murray Butler and Prof. Paul Henry Hanus, who have devoted their best years, their distinguished talents, and the innumerable resources placed at their command, to the reducing of the principles of teaching to a nearer approach to the limits of a well-defined science,—both President Butler and Professor Hanus fully concur with Spencer in his view of the primal aim of education. This is, indeed, a remarkable commendation of the basis of "What knowledge is of most worth?" The superstructure of that literary edifice, however, does not meet with the same approval, and deservedly not.

It is strange that a man of Mr. Spencer's insight should consider the sciences of greatest educational value, as, appealing most strongly to the physical, intellectual, and even to the æsthetic and religious interests of mankind. It may be that he became intentionally guilty of this distortion, in the hope of bringing about a reaction at Cambridge and Oxford and in his nation at large in favor of scientific investigation as opposed to the literatures of the classic languages and the pure mathematics—in his day and country the *alpha* and *omega* of a liberal education, the *ultima thule* of the world of intellect. Or, may it not be that because of his own preference and natural aptitude for the observation and deduction required for scientific pursuits, he inferred that for all, as for himself, the sciences are of greater worth educationally than are the more humanizing branches of history and language? Again, a reason of Spencer's choice may be sought in the personal chagrin arising from his being debarred from a Cambridge career on account of his insurmountable aversion to linguistic study, and of his being forced by limitation, as well as by special aptitude, into the calling of railway engineer.

Whatever may have been the reason of Spencer's judgment as to the respective values of branches of knowledge, public opinion is not with him, but rather with the author of Educational Aims and Educational Values who argues that, as man is primarily a social being, the highest incentives and the greatest variety of incentives to exertion are found in the group of subjects dealing with human conduct and achievement, as history, literature—particularly that of the mother tongue—which, when studied aright, is the means of exploring and interpreting both the world of external nature and the world of man.

In his essay Intellectual Education Herbert Spencer adopts the theories worked out by Comenius and Pestalozzi. With Montaigne, he considers learning by heart not learning at all, and with Pestalozzi he would have the student proceed from the simple to the complex, from the concrete to the abstract, from the empirical to the rational, from the easy to the difficult. Exception may be taken to M. Comte's doctrine, endorsed in this essay, that the education of the child must accord both in

mode and arrangement with the education of mankind as considered historically ; but there can be no gainsaying the argument set forth in favor of making the child his own teacher by obliging him to make his own observations and to draw his own conclusions. With Comenius, Spencer would have all knowledge taught in its elements to young children. Long before the rigorous geometrical demonstration can be grasped by the child, constructive geometry may be pursued with interest and corresponding profit. And that education may not end with a feeling of long-looked-for relief as soon as school days are over ; he would have it a process of pleasurable instruction.

The essay on Moral Education opens with the subject that is hinted at in the first essay as of basal importance in the work of education ; viz., parental care of offspring. The writer dwells at length on the necessity of future parents preparing, in a special and definite way, for the care and bringing up of their young. Here Mr. Spencer would certainly have rendered his teaching and exhortation vastly more effective had he himself married and shown the world how easy of practice are the duties he requires of his wedded neighbor. But Spencer does not marry. Like a sign-post he unerringly points in the direction men should go, but he does not lead the way. In this he is like Rousseau, who recommends that children should be secluded and isolated from intercourse with society, and he himself sends his children to an orphan asylum—like his own Pestalozzi, right in his fundamental ideas, but nearly always wrong in his application of them.

Discipline by natural consequence instead of by artificial penalties, Spencer has borrowed in its conception from Emile. He has foreseen and pointed out the folly of setting up too high a standard of juvenile conduct, and of urging strong incentives to such good conduct, on the ground that moral precocity is as detrimental in its results as is intellectual precocity.

Physical Education is prefaced by another lamentation, that the care of human offspring is sadly neglected in comparison with the attention given to the breeding and rearing of irrational animals. The author advises, and judiciously so, that



food of children, for a stronger reason than for that of these lower animals, should be sufficient in quantity, wholesome in quality, and in kind presenting a variety that will induce appetite and preclude satiety. Clothing, too, should receive the attention it merits, being at all times suitable to the season, and so regulated as to prevent as much as possible the sensation of cold.

Bodily exercise is dwelt upon and highly recommended, play is preferred to gymnastics, and over-application to study is considered in the light of its action on the physique and of its reaction on the brain itself. Mental over-exertion consumes that animal energy which after all makes for success and happiness in life more than does information. Mr. Spencer ends this, the last of his four ponderous but trenchant and forcible essays, by stigmatizing as physical sinners such as, through carelessness or through an imaginary sense of personal disinterestedness, maltreat or neglect their bodies, forgetful that the physical underlies the mental. He would have all realize that there is such a thing as physical morality and that the preservation of health is a duty.

The four educational essays of Herbert Spencer impress one with an exalted idea of the power of their author at generalization, of his acquaintance with the minutiae of many departments of science, and of his unsurpassed wealth of illustration. Their practical effect on the reader is the conviction that education is a thing not easy and simple, but complex and difficult, offering pabulum to the most fertile brain, and affording profitable vent to the greatest possible store of human energy.



## *Economy in Teaching Composition*

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ONE way to economize is to do without. It is sometimes possible to sail languidly through the pleasant seas of literature, rarely calling for written work, rarely correcting the little that is called for, and still receive the reward of a faithful teacher. Youth is the proper time for superficiality. Drill in composition deadens spontaneity, destroys individuality; does not belong particularly to the English department, anyway, but to all departments alike. The correct speller is born, not made. There is no such thing as English grammar. How many pillowy doctrines there are nowadays. Really, if shrewdly managed, English teaching becomes a restful diversion which need not interfere with one's more important activities, a healthful exercise calculated to put one in trim to endure the strain of the more arduous summer months.

A better kind of economy consists in carefully studying the situation, and then so planning the work that every ounce of expended energy counts. It consists in distinguishing between the possible and the impossible, between the profitable and the unprofitable; in knowing precisely what one wants to accomplish and, the goal once determined, holding to the course. It means keeping one's sense of proportion true at all times, and being ever alert to discover new and better ways of doing things.

Perhaps my article should end at this point, for I am unable to say, "All these have I followed from my youth." I have no royal road to reveal, no new method to advertise. Yet it may be that a number of years spent in a large high school, where the burden of handling composition is sufficiently heavy to make one alive to labor-saving devices, may have taught me a few things—ways of looking at the problem, ways of accomplishing certain results—which may be of interest to those of less experience.

Faulty English, it may be asserted without much fear of contradiction, is due to three causes—ignorance, lack of practice in careful expression, and indifference. Perhaps all will not agree with me in thinking that if the first two causes are removed, indifference as a rule disappears. It is but natural that a boy takes little interest in a game in which, because he does not understand the rules, or because he has played but little, he cannot excel. Perhaps, too, the average teacher does not realize how very ignorant boys and girls really are. He expects too much, and misplaces his emphasis, putting stress on written work when the class really needs instruction in regard to what is right and what is wrong. The statement that the only way to learn how to write is to write needs to be qualified somewhat. I wonder if it is not true that the teacher of composition has won half the battle when he has fully determined the relative importance of these three causes, and their relationship one to another.

I use the blackboard a great deal, being convinced that faulty English is largely due to ignorance, and that blackboard exposition is most economical. For example, in looking over many exercises I find that fifty or even one hundred words are commonly misspelled. Simply to mimeograph these and set them before the class to be learned would not produce permanent results, though it would take considerable time. But upon examination the words are found to belong to five or six groups or families. There are the words with silent letters, others in which the final consonant is sometimes doubled, sometimes not, before a suffix. Still others have a final *e* which is sometimes dropped before a suffix, etc. The boy's eye has not been trained to notice word structure, it may be; perhaps his attention has never been called to certain simple rules for spelling. By placing five or six words on the board now and then and focusing the attention of the class on them for a few minutes at the beginning of a recitation period, by making the offenders study the peculiarities in spelling, occasionally discovering a rule, common errors may be gradually eliminated. It takes but little time, and may save hours of correction.

Blackboard exposition is equally valuable in teaching punctu-

ation. Perhaps it is not wise to cover the board with incorrectly punctuated sentences gleaned from compositions, for such sentences are frequently so faulty in structure as to be beyond punctuation. Still, I do collect such sentences, and sometimes use them in this way. More often I simply study them to discover what are the popular errors and how they have come about, then put on the board correctly constructed sentences, in writing which similar errors might be made, and ask the class to punctuate them, in each instance giving a reason. Some things must be pointed out; but punctuation is so much a matter of common sense that the class soon discovers the simpler rules. To be effective, the exercises should be frequent for awhile, and systematic; they need not be long or difficult. Properly conducted, I think they pay well, because they head off many errors which otherwise follow the pupil for years and make necessary long trails of red ink.

Sentence and paragraph structure may be handled in much the same way; and here I do not scruple to place boldly before the class the faulty as well as the correct. But the blackboard has its greatest value, perhaps, in teaching pupils to build essays in orderly fashion. Too often we simply assign a subject and feel that we have no further responsibility till the essay comes to us for correction. This works well enough with geniuses and with the few whose minds travel naturally in straight lines; but youth in a normal state is too often a young dog chasing sparrows. I think we do far too little in the way of showing pupils how to arrange their thoughts in orderly fashion. The simple sequence of time, the sequence of cause and effect, the marshaling of facts to be followed by a conclusion, or the making of an assertion to be followed by illustration,—there are a dozen simple schemes of arrangement which should be suggested. It takes time to write a long composition, time to correct it. But if, now and then, the instructor announces a subject and calls for simple suggestions in regard to how the theme may be developed, and as suggestions come from this one and that, jots down headings and sub-heads, introduction, body, conclusion, till there grows before the pupils' eyes a consistent scheme,—such a joint production may accomplish more than if all the pupils were to write many compositions.

- In short, not to multiply examples, the blackboard may be made a most effective agent in leading boys and girls to observe, and think, and arrange their thoughts in orderly fashion. There is economy in the co-operation involved, economy through emphasis in focusing the attention of an entire class intently on a single point, economy in clearing away misconceptions promptly, and in assigning work only after the class has been led to discover how this work may best be done.

Of the many forms which drill in written composition may take I have adopted three, each with a definite underlying purpose. The first of these is the short exercise written in class. This varies greatly in character. It may be merely a test in spelling or in sentence building. It may consist in planning a theme or in writing an opening paragraph. More often it consists in composing a single paragraph, complete in itself, on some simple topic—narration, exposition, description, argument. It may be closely related to whatever the class is reading, but this is by no means necessary. The main thing is that the exercise be short, and not designed to test the pupil's knowledge, but to give him practice in expressing himself. It should not be made "quick work," at any rate not before the senior year. It should come frequently, but not necessarily every day. To save time, I use for drill of this sort tablets which are kept in the desks occupied by the class. The leaves written upon are torn off and left with the teacher at the close of the hour.

Not all such exercises need be corrected; perhaps most of them should go to the wastebasket unread. There are, of course, inert pupils who must be watched; but the purpose of the exercises does not call for careful correction, save in individual cases. The papers are read, if at all, for the purpose of discovering what errors are common. Will boys and girls take pains if they know that their work is not always examined? I think so, if the instructor is strong and dares to be frank. To borrow a phrase which recently fell from the lips of a successful teacher of English, the class must be made to feel that they "have got to." Once get the right sort of traditions established and all will go well. No method will succeed with a weak teacher.

But brief exercises of this character are not all that is needed; there must be longer tasks calling for specific preparation and protracted effort. These demand more time than a single recitation period. They should be done at home, where usually one works to better advantage. The nature of the assignment may vary widely, but it should rarely call for more time than is ordinarily spent in preparing a lesson in literature. An hour or an hour and a half, used not in acquiring information but in arranging and expressing one's thoughts, is quite enough. Nothing is gained in exhausting the pupil. These exercises are read with care, the errors located rather than named, the good praised rather than the bad exposed. Many errors go unchallenged. It is better to allow an error to disappear of its own accord than it is to chase it away.

To facilitate this line of work, and another soon to be mentioned, each pupil in school has a "college binder" theme book, narrow enough for the book strap. The ruling runs the long way of the page; the front cover is so hinged that it may be turned underneath. The paper can be renewed or removed from time to time. No doubt there are other kinds of composition books equally good, but of one thing I feel certain: a composition book of some sort is necessary. It saves time and labor. To keep in mind week after week the needs of one hundred fifty or more individuals is next to impossible. But if the exercises are preserved in a binder, the instructor can turn back from time to time and note what criticism has been made—review the history of his patient before writing a new prescription. Perhaps the exercise of to-day is very faulty, and there is a temptation to be severe; but by referring to the work of the week previous the critic notes that there has been an unmistakable effort to improve, attended by some small degree of success. Praise is a stronger incentive than censure. Or it may be that the theme is moderately good, yet reference to previous work shows that the pupil is growing careless. This tendency must be checked at once. Or it is found that the same correction is being made over and over again without effect. This shows that the boy does not understand or is indifferent, and in either case needs to be interviewed. In many ways, then, by

having before him a history of the pupil's endeavor the instructor is able to comment with greater effect, and saves energy by saying the right thing at the right time. I think, too, that in a large school there is a distinct advantage in having some few things done in the same way. Reasonable unity in method and device suggests system and importance, conveys the much-desired impression that even composition, by reputation vaguest of all that comes under the vague term English, is not altogether an incidental matter to be treated in a haphazard manner.

The third kind of written work which commends itself to me is the old-fashioned composition or essay, coming not oftener than once or twice a term, and varying in length from five to ten pages. This is made a serious matter. Pencil work in class is important, and so are the weekly two-page pen and ink exercises done at home; but when we reach a composition dignified by the term essay, there must be no trifling. In a way all that has gone before but leads up to this final effort. The selecting of appropriate subjects is all important, and the teacher's cunning is nowhere better shown than when he selects for a given class ten or twenty topics of real interest. He must indeed be shrewd to discover individual tastes, to steer away from the library, and to refrain from catering to his own tastes rather than to those of boys and girls. He must see to it that effort is expended not so much in gathering information as in imparting clearly, artfully, sincerely, information or ideas or fancies already in hand.

The old-time composition is, we all know, at present not in good favor. Paragraph drill is more popular, and many consider it all that is necessary or desirable in high school work. Longer, more pretentious productions suggest an attempt to be literary. We are warned that we must stick to the practical and let art alone. Clear, accurate expression is, beyond doubt, of first importance, and the average pupil may be quite incapable of producing anything that even faintly resembles literature. But to my mind the supreme end—seldom reached, however—of all literary study is gained only when the pupil feels a strong desire to give clear, pleasing, vigorous expression to whatever he may have in mind that he considers worth transmitting to his

fellow mortals. Perhaps this may be called a desire to be literary ; there is nothing in such a desire, however, that is hostile to practical accuracy. But whatever the end in view, the long composition, calling for a series of paragraphs expressing a logical sequence of thought, is needed, I think. It should not be discarded merely because it may lead to priggishness and other forms of petty dishonesty. And, personally, I count it a duty, here perhaps more than elsewhere, to invite something better than bald accuracy of expression.

It takes time to write an essay, time to correct one. In a large school personal interviews are seldom practical ; the criticism must be written. It requires but moderate skill or expenditure of energy to run through a theme and leave a little red ink here and there where something is a bit out of order ; but to give in fifty or one hundred words at the end precisely the right kind of censure and praise is an art seldom gained save through years of experience. One way of making such criticism effective I have found a great labor saver. It consists in recommending in each case some book to be read wherein an author of note has accomplished something similar to that which the pupil has attempted. For example, in correcting a recent batch of essays I have referred frequently to such works as Stevenson's *An Inland Voyage*, Winter's *Gray Days and Gold*, Gilson's *In the Morning Glow*, Jewett's *Deephaven*, Ruskin's *King of the Golden River*, Warner's *In the Wilderness*, Parkman's *Montcalm and Wolfe*. It is surely good economy to thus pass the pupil on to abler critics. Records kept with some care show that hints thus given are usually taken. Still another way is to make the essays correct one another. If two or three of the best are read in class the pupils are surprisingly quick to discover points of excellence, quick to see wherein they have failed. I have in mind one such essay, which served as a model for many months with excellent results. The pains the writer had taken to give her theme an appropriate structure, the care with which she presented picture after picture of a certain farmhouse at different times of the year and at different stages of its life, and the unmistakably genuine emotional tone which pervaded it all, were a revelation and an inspiration to many.



Blackboard exposition, ten-minute drill in class, weekly exercises prepared at home, and old-fashioned compositions coming once or twice a term,—these, then, are the weapons with which I battle against faulty English due to ignorance, indifference, and lack of practice in expression. Were it my purpose to do anything more than indicate in a very general way how composition work in a large high school may be handled economically, I should want to touch upon many other matters. To avoid misconception, perhaps I must say just a word on two other topics, the text-book in composition and the relationship of the study of composition to the study of literature.

Young teachers are inclined to scorn text-books, I think; experienced teachers look upon them as a necessary evil. Like the college binder, a book is a unifying force, a curb to the erratic teacher, a guide to the inexperienced. Particularly during the first two years of the high school course it seems to me almost a necessity; not that I value the theory it expounds, or feel the need of suggestions in regard to appropriate subjects for composition, but because it contains, or should contain, many exercises which do not call for pen and paper—oral exercises in punctuation, sentence building, etc. It is a labor-saving device. Yet it must, of course, be used with caution and supplemented at many points.

After all has been said, the strongest force in teaching composition is the course in literature, made up as it is of models of forceful expression. If abundant drill is given in oral reading, the eye is trained to see the relationship of part to part in the sentence. If literature is studied as an art, if the pupil is frequently reminded that each piece of prose and verse is but a composition, obeying the same laws that he too must obey if he would express himself with clearness and force, the effect cannot but be felt. If it is shown that the author when beginning his work first determines the end he would reach, and then bends his energy to realize this end, the value of structure and unity becomes apparent. Every lesson in literature is a lesson in the art of expression.

I am quite sure that the plan outlined will not work in all schools; indeed, I am not sure that it has ever fully succeeded in any school. I trust it is not wholly wrong in principle, however. Let the final word be this: Almost any method of work is better than no method at all. There must be a plan of some sort, and that plan must be adhered to; otherwise the teaching of composition becomes a burden which none but poor instructors can stand.

## *Physical Education*

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IN determining the merits of any branch of knowledge, we usually speak of the mental discipline and educational value resulting to the child, and rarely do we consider the physical side of its existence. Truer words were never spoken than those of the French philosopher Montaigne, who said: "It is not a mind alone, nor a body that we are developing, but a man"; and he might have added that the one can stand out in its fullest brilliancy and usefulness only as the other is made strong and perfect. This, it is quite evident, is a sufficient basis for an argument favoring physical education.

History reveals the fact that during the last generation, through indifference and prejudice, the subject of physical training remained dormant, but to-day the American people are fast awakening to the fact that education in its highest acceptance is more than a mere training of mental faculties; that the development of the laws that govern health is of primary importance, because of the dependence of the former upon the latter. As the history of individuals proves this relationship, so does the history of nations.

Ancient Greece was the first country to make physical exercise a part of the education of youth. As long as those exercises were practiced, Greece steadily rose in intellectual and political power, but when the evils accompanying a rich and luxurious life caused them to be neglected, then her intellectual progress stopped, and her political power began to wane; with what result the reader is familiar. Later, for like reasons, Rome experienced the same downfall. Germany, in comparatively late years, has made great advancement, both in political power and intellectual growth. She attributes a large share of this advancement to the influence of her system of physical education introduced into her public schools and her army. Thus we find in studying the history of physical education

through its changing course that whenever it has received the attention and support of a people, the moral and intellectual standard of that people has been raised ; but when through indifference and other causes it has been neglected, then there has been a corresponding retardment of the race.

Regarding this subject in its modern interpretation, physical education includes more than the development of mere brute force. It must be broad enough to include formal gymnastics, plays, games, and all forms of motor training, with attention to general hygiene and dietetics. Improved methods of heating, lighting and ventilation, adjustable school furniture, the seating of pupils with reference to sight and hearing, proper wardrobe facilities, cleanliness, playgrounds that give opportunity for free and unrestrained exercise,—in short, the whole child is to be looked after.

There is much of promise in the tendency of the times to study seriously the play activities of children, and turn to the best account that strongest of childish instincts. We do well to study and apply the inspired teachings of the German master. We are just beginning to realize what Froebel meant when he said : “ The play of the child contains the germ of the whole life that is to follow ; for the man develops and manifests himself in play, and reveals the noblest aptitudes and the deepest elements of his being.”

Play is the highest phase of child development, for it is the self-active representation of the inner from inner necessity and impulse. Dr. Stanley Hall struck the keynote of physical training when he said : “ I plead strongly for physical education on the ground of good morals. The child should think on the basis of the most perfect human tissue that digestive apparatus can produce ; but when you see flabby muscles, bad complexion and other signs of dyspepsia or imperfect nutrition, it is certain to affect the thought.”

Nature indicates the method and the order of implanting into the child that instinctive desire and imperative demand for almost ceaseless activity, and by lavishing on the young that excess of the emotional and imaginative faculties which necessitate a constant doing. This desire for doing may be directed so as to

result in much good to the child by a skillful teacher. Perhaps a characteristic of modern educational methods stands out more prominently than that the child must be considered as a unit, and not merely as an assemblage of faculties, to be treated singly and in a mechanical order. All mental processes have a nutritive background. The quality of thought is so largely conditioned by the character of the bodily tissues that the rational educator must ever consider the question of mental stamina and physical vigor as inseparable.

The school takes charge of the child at a most critical age, and for the greater part of the day during a period of years exercises control over its actions. It is, therefore, a matter of the greatest importance that this control shall not be of such a nature as to do violence to the child's growth and physical development. Oppenheim in his recent work on *The Development of the Child*, in discussing the facts in the comparative development of the child, says: "We have been in the habit of looking upon a child as a man in small, and of looking upon a man as a child somewhat strengthened with greater experience and knowledge. Outside of these factors of experience, knowledge and strength, the child and man seem practically the same."

We, however, are reminded that during the whole growth period there are numberless factors of variation and irregularity which at times are so striking as to amount almost not merely to differences of degree, but almost to differences of kind. The period of infancy and childhood are times of preparation; the organism is unstable, incomplete, "unripe," and possesses no fixed type as in the adult. Hence it is that intelligent direction is needed at this time.

Considering the feature of physical training, generally known as gymnastic exercises, there is a mistaken notion prevalent that exercises cannot be taken in the regular schoolroom. Calisthenic drills, executed with counts, marching and breathing exercises, will be sufficient, and can be given without adding especially to the work or cares of the teacher. A period of fifteen minutes, or two of ten, spent each day in suitable exercises, will prove most beneficial to the health and general work of the school, and aside from the salutary effects derived, will assist

greatly in the general order and discipline of the pupils. Surplus energy thus worked off will not be directed in undesirable channels. To experience the best results the exercises must be given regularly and at a fixed time each day. The movements should be carefully analyzed and explained, and much stress placed upon their correct execution.

There is little need to fear the lack of hearty co-operation on the part of pupils, for they will take to the work readily, and any teacher who manifests interest himself cannot fail to interest and inspire others. Teachers will learn that nothing will do so much to aid discipline and relieve the restlessness of children as some form of gymnastic exercise. Round shoulders, faulty carriage and ungainly appearance will be improved by the introduction and proper execution of a systematic course of gymnastics. To use the words of Jesse H. Bancroft, "The objects to be attained by physical exercises in the schoolroom are: stimulation of the nutritive functions, correction of posture, symmetrical development and a general basic training of some of the psychological powers, particularly those of the will."

Turning to another phase of the physical welfare of the child, we may consider the heating and ventilating systems. In a school in which stoves still are in vogue, part of the room is too hot and part too cold, the face burning and the back freezing, or *vice versa*. Then there is a choice of systems: hot air, hot water, steam, etc. Still with all the modern appliances for heating and ventilating we seldom, if ever, find in a large building that all the rooms have that equable temperature so necessary to good work. Some rooms are always too hot, some too cold, while others are either at one extreme or the other. In few rooms heated with modern appliances is there any place for children having cold feet, wet feet or wet clothing to warm and dry them. Dr. Higbee, that venerable educator, on one occasion, while addressing a body of teachers, expressed this thought: "If your children come in having cold hands and feet warm them. If they come in having wet feet and wet clothing dry them. Do these things first, and you will have done more for them by taking care of their physical wants than if you had neglected them and tried to impart instruction." This, according

to modern views, contains the essence of a teacher's duty toward his pupils,—first the physical, then the mental.

The question of oxygen is one of vital importance, as is the question of schoolroom ventilation, the latter being unsettled. Everybody is satisfied that the average schoolroom is stuffy, the air impure. How to remedy this is the question. With all our fine systems of ventilation there is still room for improvement. If this be true of the average room, what must be the condition of the many rooms below the average?

Coupled with the heating and ventilating problem comes another from a hygienic standpoint,—the question of cloak rooms. That the cloak rooms should be of ample size, so that the clothing of each child may have a separate place, free from contact with the clothing of other children; that the room should be well lighted and ventilated in order that the wet garments may be rid of offensive odors, and the danger of infection be reduced to the least possible, is unquestionable. These requirements do not seem too high, yet the cloak rooms in few of our modern buildings would meet the simple requirements suggested.

Cleanliness of dress, body and schoolroom is conducive to good health. That all the schoolrooms should be as thoroughly cleansed, and so kept as the rooms in our own homes in which we live, would not be controverted by any intelligent citizen.

An oculist of no mean reputation remarked that upon the most reliable medical authority it was safe to say that eighty per cent of the American children have some form of *ametropia*, *i. e.*, a deviation from the normal eye, while only twenty per cent have *emmetropia*, or normal eyes. He goes on by saying, if proper care be given, many of these eighty per cent need never come under the oculist's care, as nature will help remedy the defects; but if conditions are unfavorable,—*i. e.*, if the lighting be improper,—the trouble will be precipitated.

In discussing the essentials to the good health and general welfare of the child, it would be nothing short of an injustice to pass over unnoticed the one person who makes it possible that everything provided for the child's best interest be so used—the teacher. As is the teacher, so is the school; the teacher is the life of the room, the leader, the child's ideal. She it is who comes in daily contact with the child, knows his wants, his defects, his weaknesses, his strong points, and his needs. It therefore be comes a duty to impart such knowledge and give such training along the lines mentioned as will qualify the child to take proper care of himself.

That the teacher be well fitted mentally and morally for her work is essential; and it is equally essential that she be well equipped physically.

## *The Program in Elementary Schools*

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ONE of the great problems before the teacher is how to make out a good working program. It has been the cause of many failures, and hence it is of vital importance. The program is necessary to bring unity into the work, and much time and thought should be given to mapping out one that will be suitable and correct in principle. It is a difficult task, and requires very careful planning and study. This exhibits the teacher's knowledge of the fundamental principles and laws of psychology and pedagogy more than almost any other part of her work, with the exception, perhaps, of the method of the recitation. It is a factor in school economy, and a teacher's success may depend largely upon her ability to construct her program.

Let us review some of the principles that must be found in every well-regulated program. It is the chart by which the school is run, and if properly made will lead to methodical habits on the part of both teacher and pupils. It is a great saving of time and energy. There must of course be a time for recitation and one for study, and these should alternate, giving a definite amount of time for each. It is very important to look after the study part of the program. Here is where the teacher often fails. A certain amount of time is specified for the recitation, but no attention, or very little at least, is given to the study proper. This requires more emphasis. It is important that the teacher should look after the study part as well as the periods of recitation. A definite amount of work in a certain subject should be assigned for the pupils to accomplish in a specific time. Some might argue that there should be freedom; that the pupil should be permitted to study whatsoever subject he might desire. Not so. Some might, perhaps, wish to study arithmetic instead of language; some might want to play instead of studying, and it is plain that this could not be allowed. There should be a time for everything, and it should be done at that particular time. The teacher and pupils are obliged to con-

form to the law that has been established for the school,—doing a certain definite thing at a certain time. It forms habits of regularity and cultivates the will.

Every program should have a period for assisting the slow and backward pupils. The teacher must know the danger points of each subject, and see that the pupils are safely over them. All of the pupils of any grade will not be of the same mental caliber, and it will be found necessary to render individual assistance. This period is very important. Many perplexing questions will arise, and the teacher should have a definite time to assist those pupils who may need it. This period gives her an opportunity to come in closer touch with the individual child, learning his needs and getting hold of his peculiarities. He will doubtless have hereditary tendencies and an environment that the teacher must learn. The more insight she has into the child's eccentricities, the greater her power as a teacher. At this time she can get closer to the child who needs assistance than she can in the presence of the other pupils in the regular recitation. The weak pupils are the ones whom she especially needs to study, and this is her golden opportunity.

There should be periods for rest and exercise. Pupils need a change and recreation. There should be at least two such periods in each morning and afternoon session. One may be used for some gymnastic exercise and the other as a whispering recess, when the pupils may have the liberty of the room and perhaps of the hall. These breaks may occur about the end of each hour, or when the session is about one third and two thirds over. The general recess should occur at the same time throughout the school, while the period for exercise may vary according to the grade and whenever the teacher thinks the fatigue point is reached and a change is wise. Extra periods of rest and exercise should be given to young children.

The program should not be ironclad, but flexible, and subject to change to keep it up to whatever may be required. It should be followed quite closely, although there may be occasions when it may be wise to deviate from it. There may be exceptionally strong interest in some particular subject; it



would take perhaps four or five minutes longer to finish the topic. To close without finishing it might mean a great loss of time and energy, and it would be wise to complete it, as the pupils might not get worked up to that point of interest again. They would now grasp the subject more readily, assimilate it more easily, and hold it more firmly.

The number of minutes devoted to a recitation should be given as well as the time when it is to occur. The program should be posted in the room, so that the pupils may know what it is and have the privilege of studying it.

Let us consider the length of the recitation periods. They ought not to be long. Children are not able to hold their attention to any given subject for a considerable length of time. Their power of concentration is weak. They will cannot hold the attention. The period of recitation should not exceed fifteen or twenty minutes in the primary department, while in the grammar department it should be from twenty to thirty. In the first grade ten minutes may be long enough. Avoid extremes. Have the periods long enough to cover and clinch the points of the lesson, but not so long that interest will be sacrificed. Of course the time will vary again according to the subject. Spelling, for example, will not require the amount of time that should be devoted to arithmetic or grammar. The teacher should aim to economize time in every possible way and to have something ready for any unoccupied minute if such should arise.

The first few minutes in the morning and afternoon should be devoted to some general exercises. This may include a song, a talk or story, memory gems, a lesson on morals and manners, a short drill in mental arithmetic and current topics in the upper grades. There is great value in these exercises. When the pupil first comes into the schoolroom his mind is filled with thoughts of his games or something in common with his playmates. He has not sufficient will power to take his thoughts away from the things without and concentrate them on his lessons or give attention to the recitation; but by means of the opening exercises in common with his companions, his thoughts are gradually drawn away from his sports and riveted to the work of the day in the schoolroom. While these distracting thoughts are in his mind he will accomplish but little. These

exercises drive them out and thus assist him in concentrating his mind on his work.

The program must distribute and arrange the various subjects, and this involves no little thought and difficulty. The teacher must take into consideration the order of the unfolding of the mental faculties and those that are required in each subject. The faculty that appears first will become stronger than the second, the second stronger than the third, and so on down the line, because the first will have had more exercise. The last to appear will be the weakest, and cannot stand as much exercise before the fatigue point is reached as those that precede it. Observation appears early, while reason comes last on the field of action. A subject in which reason predominates should not be given as much time as one where observation is the principal faculty. The following table will show the four faculties that are prominent in the various subjects, and they are given in the order in which they unfold:—

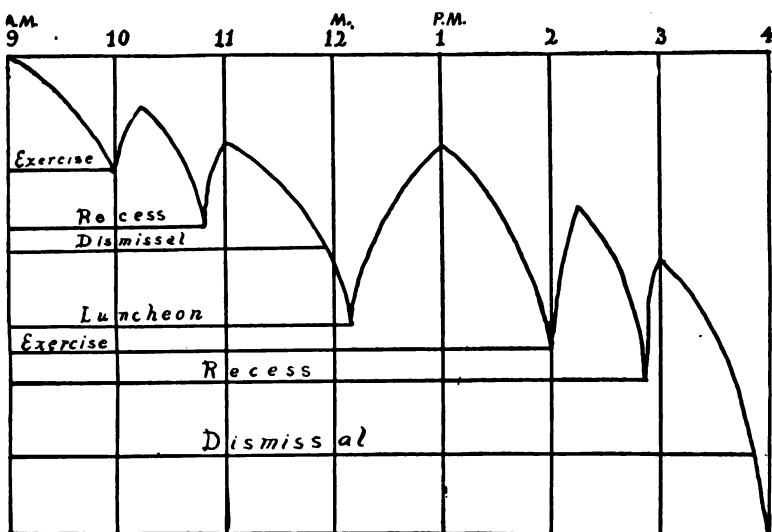
|            | Observation. | Memory. | Imagination. | Reason. | Feeling. |
|------------|--------------|---------|--------------|---------|----------|
| Arithmetic |              | M       |              | H       |          |
| Grammar    | H            | M       |              | M       |          |
| Geography  |              | H       | H            | M       | M        |
| History    |              | H       | H            |         | H        |
| Literature |              | H       | M            |         | H        |
| Nature     | H            | H       |              |         |          |
| Physiology | M            | M       |              |         |          |
| Spelling   | M            | H       |              |         |          |
| Reading    | M            | H       |              |         | H        |

Several faculties may be used in any one subject, some requiring two, some three, etc. The degree in which the faculty enters the subject is designated by H for high and M for medium. Because no mark appears below a faculty and opposite a subject, it is not intended to indicate that the faculty does not enter into that subject. It means that if it does enter it is slight, and for our purpose we are dealing with the high and medium. No faculty has a high or medium force in all subjects, except of course memory. The degree in which any particular faculty will be employed in the several subjects will vary. Subjects should be so arranged that a high tension of the same faculty will not be required successively. There should be a change and this gives rest. While one is at work the others are resting. It would be wrong to have one subject follow another where both require a high exercise of the same

faculty. We would not therefore have history follow geography, or *vice versa*, because both are high in memory and imagination. The same is true of arithmetic and grammar, both requiring memory and reason, and particularly reason. As this is the last of the faculties to appear, special care should be taken not to overtax it.

We must also take into consideration the three great classes into which all of the common school subjects fall—the practical, the disciplinary, and culture values. Here it is not wise to bring together two subjects, belonging to the same class. Each has a different aim, and a change gives variety and removes the fatigue point. History and literature are culture subjects and should be separated. Reading and spelling are practical in value and one should not follow the other. The teacher should understand the educational value of the different subjects and carefully avoid bringing any two together that possess a high value in any class. The best plan is to separate them but consider the intellectual faculties involved. She should consider the educational value in designating the amount of time that she will give to each subject.

Lombard has shown by experiment that the nervous energy is subject to rhythmic variations during each day:—



The diagram will give a general idea of its rise and fall. Our nervous energy is usually the highest in the morning after a good night's rest. As the day progresses it gradually falls till the rest period is reached, when it rises, but not as high as it was in the morning. This shows the value of the rest period. It now takes a downward course till recess, when it again rises, but not as high as it was at the former period, when it again falls gradually lower till rest and food are taken at noon. After this it again ascends, but not as high as in the morning. This variation will be followed out during the afternoon, so that the poorest time for work during the entire day is about four o'clock. Here the nervous energy is at its lowest ebb. Let us turn to the subject of the intellectual faculties again. The last to appear requires the greatest amount of nervous energy. The subjects that demand reason call for more brain power, and hence should be placed on the program at such times when the nervous energy is at its highest point. We see that arithmetic and grammar are two that require the exercise of reason. We have seen that one should not follow the other, and we now see that they should be placed at such a time when there is an abundance of nervous energy. As arithmetic is high and grammar medium, there can be no question as to what time of the day arithmetic should appear on the program. Such subjects as writing, drawing, singing, sewing and manual training should come at those periods when the nervous energy is at its lowest points, which is just before exercise, recess and dismissal, morning and afternoon. These subjects should never come after recreation and recess, because there is a certain amount of exercise in them and they require less nervous energy than other subjects. There should be a variety in the program. Monotony should be avoided. It is a good plan to bring in music after a period of quiet work, but at a low point of nervous energy.

The teacher may not be able to succeed in getting her program to run smoothly and satisfactorily at first, but with care and study along these lines she will be able to map out one that will be systematic and will prove of great value in her work.

## *Some Factors of School Government*

PRINCIPAL E. L. COWDRICK, LAWRENCE, KAN.



**A**MONG the questions pertaining to school management and methods which have been under discussion for the last score of years, none outranks in interest and importance that of government, and upon few others are there so many differences of opinion. We are possibly nearing the end of the reaction against the old methods of discipline, though the new ones are yet on trial, and it is too soon to pronounce them either a success or a failure. However, it is a fair question to ask whether or not the new ways have produced a higher type of citizenship than did the old. Is it not possible that in our zeal to train the children in the virtues of self-government we are allowing them license instead of liberty? The lesson of obedience is a hard one both to teach and to learn, yet it needs must be learned before the child is truly educated. He who is to rule must first learn to obey, and the only time to learn to obey is in childhood, and the only places this lesson can be learned are in the home and in the schoolroom.

In the governing of a school three prime factors must be considered: the school board, the parents, and the teacher. To these must be added that indefinite and mercurial something called public opinion, which raises "a mortal to the skies" one day, only to "pull him down" the next. No organization is so sensitive to changes in the current of public opinion as is the public school, and the teacher realizes, as few others can, the crushing force of its decrees; and too, he realizes, as very few do, how fickle and changeable it is.

As public opinion is merely the sum total of the private opinion of individuals who support the schools and are the parents of the children therein, it is easily understood how an adverse public opinion will render the hard task of the teacher yet harder, and even in the end make his best effort a failure. The governing of a school is not easy, and if the children get the idea that the teacher is arbitrary and unreasonable, the difficulty of his

work will be greatly augmented. Parents, whose chance remarks and hasty comments make or unmake the teacher's influence, are not careful enough of what they say in the presence of their children, especially as a little encouragement from his parents is often all a child needs to make him unruly or even insubordinate, and thus the good feeling of the school is broken up, the enforcement of discipline is interfered with, the children grow more restless, the teacher more nervous, until radical measures sometimes have to be resorted to before a proper respect for authority is restored; and all this trouble was because the teacher was criticised and blamed unjustly, while all the time he both merited and needed assistance and encouragement, not hindrance and fault-finding from the patrons of the school.

The disciplining of a school depends upon the teacher, and he is justly held responsible for it; his task is a never-ending one, and at no time can he rest in ease and comfort, feeling that his work is done, for he can never tell how soon some new difficulty will arise to cause trouble; the simplest and most reasonable direction will often find a pupil unreasonable, and unwilling to obey; something of no moment in itself becomes of prime importance from the necessity of the occasion, forced upon the teacher against his will, and no foresight can provide against these emergencies, no skill avoid them.

In controlling a school the first and most difficult task before the teacher is the disciplining of himself, for when this is accomplished, if it ever is accomplished, the rest is comparatively easy. Lack of self-control on the part of the teacher is one of the most fruitful sources of disorder, and the teacher who finds his pupils growing restless and noisy should enter upon a rigid course of investigation to discover the cause. It may be that he will find it in a very unexpected place, and fortunate is he if he recognizes it when found, for then he may correct the fault and none be the wiser.

This self-education is fourfold in nature: physical, mental, moral, and spiritual; and each must be symmetrical with the other three, none given undue prominence, if one would be what God intends, the "likeness of a man created in His own image."

The body must be educated in order that the teacher may be

dignified—but do not mistake stiffness for dignity—and graceful in carriage and gesture, for the pupils unconsciously imitate him in these as in other things, and an awkward teacher is very apt to have awkward pupils; but the converse is not always true. However, a graceful teacher is certainly more likely to have graceful pupils than one who is not. Other things being equal, I would give a graceful teacher the preference over a handsome one, although I am not particularly prejudiced against the latter; but all can be graceful, even if all cannot be handsome. I look for the time to come in the near future when more attention will be paid to this important part of preparation for teaching, much too long neglected. We are prone to sneer at “finishing schools,” so-called, but in this particular the sneers are out of place, for they are giving a training which finds a place in the curriculum of none other; or at least in few, if any, of the schools for the training of teachers; so, after all, these schools may fill a long-felt want in our educational system as long as courteous manners and correct carriage of the body have no attention given them in the public school, all accorded them being merely incidental.

Little need be said about the teacher’s intellectual preparation, for the teacher of to-day is more thoroughly equipped for his work than ever before; he must be if he would not be surpassed in the keen competition which laborers in all trades and professions must meet,—the teachers most of all. There is no excuse for poor teaching with normal schools and colleges and universities on every side, where the best of training may be had for the asking; and the teacher who is poorly prepared for his work will soon find himself compelled to give place to the one who is well prepared. It is very seldom at the present day that a teacher fails from lack of text-book knowledge, but it is true that too many are content with that; their learning is not broad enough. I once heard President Quayle, of Baker University, say that no teacher could teach a subject in a satisfactory way unless he knew twenty—or was it forty?—times as much about it as was found in the ordinary text-book; an extravagant statement, possibly, but one which contains a great truth, for the teacher must be full of his subject in order to do either himself

or the pupils justice ; however, in these times so many different subjects are to be taught that to know all thoroughly is an impossibility ; but it is possible for teachers to have a broad, liberal culture outside their particular work, as well as in it, and all kinds of knowledge are of use in the schoolroom. Teaching has been called a narrowing profession, but why should it be more narrowing than the work of the minister, the lawyer, the physician, or of any vocation which demands the entire time and energy of him who follows it? The truth is that very often too much is expected of the teacher. No one expects the lawyer to know theology and medicine, or the preacher law and civics, or civil engineering, while teachers are thought "narrow and bigoted" if they do not know something of everything under the sun. But while I do not agree with one James Earl Russell, of Columbia University, in his gentle characterization of teachers quoted above, nor do I think with him that they are "pusilanimous and cringing, totally unprepared for the work they are pretending to do," I am inclined to think that Superintendent Greenwood, of Kansas City, was in a measure right when he said that, as a class, teachers do not read enough ; but he should have carried his investigations farther than the public library, for the librarian's report to Mr. Greenwood was based upon the number of books taken from the city library by teachers, and made no account of those obtained from other sources, and owned by them, or of their list of magazines—both professional and otherwise. Good literature was never so cheap as now, and the teacher who is not informed in all matters of general interest, or some of the more important ones, at least, can offer no reasonable excuse for his ignorance.

But what is more important than mere intellectual power, the teacher must not neglect the developing of his moral nature, for he must educate his pupils in morals, and to do this successfully he must be himself possessed of a strong moral character or he will not succeed ; for let the children once discover that he is weak in this essential, that he is unreliable and insincere, his power for good over them is weakened if not destroyed. If a teacher wishes to gain and keep the respect of his pupils, he must exhibit in his own person a living model of the lessons he



is striving to impress upon them; to many of his pupils he is the only model they have of gentle manners; all the lessons of right doing they learn come from observing him and his actions, and it is a grieving, indeed, of these "little ones" if their teacher fall short of their ideal. Only a strong moral nature should be entrusted with the training of children, for a weak one may do infinite harm.

Following this in natural sequence, the teacher must also be possessed of a fine, a well-attuned spiritual nature, not that he should teach religion in school,—he must live it, and so live it that his every-day practices and example show to the youngest and most obtuse that his principles are founded upon those of the Great Teacher.

But for him who would succeed in school government more yet is necessary: he must be even in disposition, not nervous and fretful over small annoyances nor large ones, either; he must be firm but not obstinate,—he must know when to yield gracefully; he must see everything, yet take notice of nothing save what is best to notice; he must be quick to perceive when pupils are imposing on his good nature, but patient with unintentional wrong-doing,—mild in punishment for trivial offenses, but severe when severity is needed; he must be appreciative of his pupils' efforts, yet he must not flatter them,—in short, he must be possessed of that very indefinite quality—the *x* of the teacher's qualifications—called governing power, if he expects to be successful in the schoolroom, and without this he will fail.

But as parents have a direct responsibility in the government of their children while in school, and should lend their best efforts in aiding the teacher to control them, it seems proper to discuss this factor next in order.

If parents could realize what a vital share they have in school government, if they could understand that both the teacher and themselves should work in harmony, if they could know how a lack of intelligent sympathy on their part, when difficulties arise, dishearten the teacher and encourage the children in wrong-doing, it would be a pleasure for them to co-operate with the teacher, and they would then be doing all in their power for the

best interests of their children. But how often there arises discord and ill-feeling where there should be concord and harmony; and as a result the sympathy which should exist between parents and teacher is lost and never regained, to the infinite injury of the ones most concerned, and for whom the schools exist,—the children themselves.

The teaching to a child of the virtue of obedience should begin in the home. If he habitually misbehaves at school it is very evident that his home training has been defective. Any experienced teacher is very soon able to tell which of his pupils have been taught a proper respect for authority and which have not. If parents could but realize how often their children betray their lack of home training by their rude behavior at school and on the street, it surely would cause a reform in this matter. It is very difficult to understand why it is that some parents can be so negligent in what is of such supreme importance; yet it is not seldom that they are forced to own their inability to govern their children, but often criticise the teacher when, because of their own neglect, he has trouble with them.

Not all parents are so careless; there is another and a brighter side to the picture, a side which I sometimes think we do not study as often as we ought; for teachers are very human after all, and the burdens of their life press so heavily upon them that too often they forget their blessings and privileges amid the swarm of "cares that infest the day," and are very prone to feel themselves martyrs in the cause of the proper training of children. One of the greatest blessings a teacher can have fall to him is to find the parents of his pupils in perfect harmony with him and his work, and appreciative of what he is trying to do for their children; parents who are thoroughly interested in their welfare, and deem no sacrifice too great, no exertion too difficult to make for them if it will advance the best interests of those so near and dear to them.

I ask the indulgence of my readers while I relate a personal experience to which I often turn with pleasure when overborne by the toils and cares of the schoolroom—and always find help in the memory—it may hearten some who are discouraged, too, as it does me.

I have in mind a father and mother who are to me a type of the best to be found in parenthood. They exhibited an interest in their children's progress in school which I have never known surpassed; visiting the school, consulting with the teachers, aiding them with suggestions, helping plan the work to be done at home, and encouraging them to do it, even assisting them when needful, and with an intelligent self-sacrifice, rare and beautiful, subordinating their own pleasures and sometimes social claims, when it was right to do so, to their children's welfare; and all this was done with such a delicate courtesy, and with such a perfect recognition of the teacher's prerogatives, that I felt that I was always free to decide in accordance with my own judgment, even when it did not exactly agree with theirs; they yielded with a graceful deference, which showed that they trusted me and had confidence in both my knowledge of what was best to do and in my sincerity of purpose. In an experience of five years I never found their zeal to diminish or their active co-operation fail me. And the children were just what would naturally be expected coming from such a home and under such influences—they, as well as their parents, being a comfort and blessing to every teacher with whom they came in contact. If all parents and children were like these, what a pleasure it would be to teach, and what a revolution there would be in methods and management, and how much better the results!

But all the fault is not on the part of the parents, for sometimes teachers repel instead of inviting their confidence, and regard a manifestation of interest as interference, and suggestions as impertinence. As a rule, parents are honestly desirous of doing all in their power to aid in advancing their children's interests, but often fail to do their part for various reasons; one of the most important, perhaps, being a feeling of diffidence, and the fear that their advances will not be kindly received. There is much to be said on both sides; there certainly should be no friction; and I think as teachers and parents come to understand and appreciate each other better, what exists now will be removed.

But the most important factor of all in the government of a school is the school board. I cannot conceive of a more honorable, or a more onerous, office within the gift of the people of

any community than that of member of the school board, for no body of men has more vital interests entrusted to it.

When the board as a unit sustains the teacher and upholds his authority on all occasions, it is a poor teacher who cannot succeed; but when the board is wavering and unreliable, or even if one member is a "weak brother," the strongest teacher has a practically impossible task to perform.

Boards must sustain the teacher if they do not want to undermine his authority and destroy his influence; they must sustain him, even if at times they must strain a point to do it; any board that will weaken when it comes to this crucial test, that will listen to faultfinders and chronic grumblers, and allow these to influence its decision against the enforcement of authority, had better resign and give place to one with a vertebral column strong enough to carry one upright,—as God intends men to walk.

Boards should be especially watchful when a new teacher takes charge of the school, for the pupils are sure to test him to see what he is made of, and he, not wishing to seem dependent upon any power but his own, often has a hard time bringing them to order, when if the board would take intelligent and wise action much trouble and anxiety would be saved him. To illustrate: Some years ago on taking charge of a school I soon found that some of the big boys were determined to have their own way, and one day I found it necessary to send one home. That same day the board came to my office and said: "We know of your difficulty, and are come to assure you that in this case and in every matter of discipline and management you shall have our hearty and unwavering support; there will be no flinching on the part of the board; we will stand right by you no matter what comes." All teachers can understand the effect of this upon the pupils and the community as well; and also they can understand how deep was my feeling of gratitude to those men for their timely action.

The great need to-day, more than ever before, is that the children be well governed, both at home and at school. It is the fashion of late years to indulge in glittering generalities regarding the training of children, the theory now being that a

child must not be compelled to obey ; he must be led to see the desirability of obedience, and do as told by his own wish, and the well-known proverb is regarded as hopelessly behind the times by these higher critics in the science of school government. But I insist that if the schools are to do the work justly expected of them in educating and training the children into citizenship, they must be taught to obey ; they must, when necessary, be made to feel the hand of authority, and sometimes that hand must be a heavy one. There is too much sentimentality in the teachings of some writers of the day, and because of this teachers spend precious time, to say nothing of nerve force wasted, in coaxing unruly children, when what is really needed is a short and sharp application of the switch, and both teacher and pupil would be the better for it. It is high time that this false theory of school government be frowned down, and common sense come into vogue again.

The government of a school is a means; not an end, and to govern a school well not one of the factors named—public opinion, teachers, parents, and school board—must be wanting in that co-operation which is essential if the children are to be taught the hardest of all lessons, that of obedience to constituted authority.



*Editorial*

THE head of a large business college in an Eastern city recently expressed himself as eminently dissatisfied with the educational attainments of the young people of both sexes who come to him from the public schools to be fitted for business life. "Why is it," he asked, "that the graduates of our grammar and even of our high schools cannot spell the most common words, know little or nothing about punctuation, are scarcely able to do simple examples in arithmetic, and have little apprehension of matters of business custom and etiquette?" "We have to begin at the beginning and make them all over," he continued, and then went on to berate the so-called "new education," which, he claimed, lays special emphasis on a lot of "fads," to the practical exclusion of good, old-fashioned studies that are universally needed as a preparation for later duties. Give us back "the three R's," and take away your manual training and nature study and what not, was the burden of this observer's complaint.

A LITTLE later we talked in another large city with an intelligent business man, the father of several sons and daughters, who complained that his children are allowed by their teachers to use loud, harsh tones without reproof or correction; that they are not taught the phonetic sounds of the letters; and that they cannot take a common passage from any good book and read it with any suitable expression, showing appreciation of its meaning. This man frankly stated it as his opinion that the reason for the existence of these defects is that the teachers themselves are in the same defective condition; that they themselves use harsh tones in the schoolroom; do not know the phonetic sounds of the letters, and cannot (or do not take the trouble to) read intelligently. These two witnesses were apparently agreed that the time given to new subjects which have of late become popular in the common school curriculum makes it necessary to slight these other things which are of practical import, and they expressed a common and emphatic protest against the result.

THESE are serious criticisms, and if well founded, need careful attention. There is a "new education." What is it, and what does it seek to do? Perhaps it cannot be briefly defined. It is too large and comprehensive; but its spirit can be apprehended. It is the application of the scientific method to the whole subject of child-training. By a sort of laboratory process it patiently seeks the facts at the basis of all educational processes. It studies the child himself, his

body, and his mind ; it investigates his heredity and his environment ; it seeks to understand his natural destiny. It finds a parallel to the individual child's development in that of the race, and so the records of history become a fund of information for the guidance of the educator in his great work. The new education seeks the best means of attaining the desired result in the full development of the young human being. It believes that there are a vast number of latent possibilities in the body and mind of the child that can be brought out. As the training of the athlete develops a host of nerves and muscles that are unused by ordinary mortals, giving the will control over them, and making the body deft and supple and able, so it is the ideal and aim of the new education to put the whole body, mind, and spirit of the young human being in tune with intelligence ; to bring out all capacities and powers in a harmonious and well-rounded development ; to build up a complete and efficient modern manhood and womanhood. Certainly this is a high aim, and these are right ideals and a true and commendable spirit. What net results have they produced thus far ?

**A** BROAD view, substituted for a narrow vision, will not fail to satisfy an intelligent observer that the new education is producing splendid results. Never in the history of the world has man known so much or achieved so much as he now knows and is achieving. His vision penetrates every portion of the globe, and searches the stars for their secrets. His swift ships and swifter locomotives carry him everywhere. No mountain is mighty enough to be a barrier, no sea so deep or boisterous that he cannot cross it. The lightning and the other great forces of nature are his servants, and his active brain is master everywhere. In all this growth and achievement education is the potent factor. It has revolutionized human life. It has given us our strenuous age. It is a mighty force that is sweeping us onward and upward in a magnificent development that can no more be stopped or deflected than the sun can be stopped from rising or the tides from moving the waters of the ocean.

**T**HE defects spoken of in our earlier paragraphs are merely incidental. We doubt if they are greater or more common now than formerly, at least in proportion to the population. The great pace of our nation along the path of progress has become a spectacle to the world's peoples, and millions are attracted to our shores to be assimilated, educated, trained for participation in our splendid destiny. In the schools we see the raw material in process of manufacture. There will always be flaws and imperfections ; but they are quickly eliminated

by the tests of actual experience. It becomes us to take special pains that our new and advanced methods do not crowd out and sacrifice what was best in the old theory and practice of teaching. The old and the new education are not mutually inimical and exclusive. The faults specified are the results of human carelessness and imperfection, and are partly chargeable upon the home as well as upon the school. By parental as well as by pedagogical painstaking they can and should be reduced to a minimum. The new education seeks this end as eagerly and more intelligently than it has ever before been sought. It is reconstructing the school program along scientific lines, and will eventually definitely settle many perplexing problems that are as yet unsettled. But no one should be blind to its already magnificent achievements. And those who are in this great epochal movement, whether as leaders and commanders, or mere privates in the ranks, should be respected as among the world's real benefactors. It is far better to aid them by sympathetic co-operation than to denounce them by narrow-visioned criticism.

ONE of the important measures inaugurated at the meeting of the National Educational Association in Boston last summer was the investigation of the subject of teachers' salaries. An influential committee was appointed for this purpose. This committee is making tables of all the salaries paid to teachers of all grades from kindergarten to superintendency, in all cities of the United States of eight thousand inhabitants and upward; in typical communities of less than eight thousand in every state; and a similar statement for twenty-five rural schools in each state. In addition, the purchasing power of money in typical localities will be studied; since it is realized that a given sum means more in a place where rents and other living expenses are low than in places where they are higher.

The committee has already discovered such facts as this: that in the past ten years living expenses have gone up from thirty to fifty per cent, while the salaries of teachers have been increased only about six per cent; so that as a matter of fact our teachers are working at from twenty-four to forty per cent less money than formerly. The steadiness of teachers' salaries is also being looked into. It is found that in many cases the teachers suffer from decreased wages where ambitious schemes are entered into by towns and cities for the erection of expensive schoolhouses. Retrenchment must take place somewhere, and thoughtless politicians sacrifice the teaching force for the sake of pretentious piles of brick and mortar. This mistake is fatal to our public schools, which will never do their best work until it is perceived that



nothing is so important as a good and permanent teaching force. An invitation is extended to the general educational public to send the committee facts and suggestions that will aid them in their work. The committee is constituted as follows: Carroll D. Wright, United States Commissioner of Labor; Prof. Joshua R. Giddings, Economist, Columbia University, New York City; Miss Anna Tolman Smith, Compiler and Specialist on European School Systems, United States Bureau of Education, Washington; Miss Catharine Goggin, Financial Secretary of the Teachers' Federation, Chicago; Edwin G. Cooley, Superintendent of Schools, Chicago; R. H. Halsey, President of the Wisconsin State Normal School, Oshkosh, and William McAndrew, Principal Girls' Technical High School, New York.

**F**OR the first time in the history of international expositions the subject of education is to have a building exclusively its own at St. Louis. The Palace of Education and Social Economy will contain a comparative display of the educational systems of all nations. This building is of the Corinthian style of architecture, and stands in a very central location. It covers eight acres, and cost \$320,000. In providing for the exhibit every effort is being made to show both the present status and the historical development of the subject, and the opportunity will be unsurpassed for the study of this, one of the greatest interests of humanity. The officers of the National Educational Association have just announced a change of date in the next annual meeting, at St. Louis. For a variety of good reasons the date has been set forward to June 28-July 2. Undoubtedly there will be a very large attendance, and from the splendid object lesson of the exhibit, illustrating the educational life of the whole world, will come new knowledge and inspiration that will play an important part in the further evolution of the race.



*Foreign Notes*

## EDUCATION IN JAPAN

The rapidity with which Japan has risen out of the patriarchal and feudal stage to that of organization for industrial and competitive purposes would challenge attention under any circumstances; but in view of the part that empire is now playing in international policies, its internal transformation becomes one of the marvels of current history. This change wrought in less than thirty years has been accomplished in the main through the agency of an effective educational system. Japan has, in fact, realized the dream of the French Revolutionary leaders that a nation might be recreated, "born," as it were, "in a day," if the educational conditions were properly adjusted.

The main features of the Japanese system of public education have been borrowed from Western nations,—from Germany, from the United States, and particularly from France,—but in combining these detached parts the government has shown the same genius for organization and direction as in the creation and control of its army and navy. This power of originating combinations and inventing adaptations of borrowed appliances was strikingly shown by the Japanese exhibit in the educational section of the Paris Exposition. It is not confined to the formulated theory of a system, but extends to every detail of its practical working, so that ideas, methods, and instruments imported from the West reappear in a novel form with unsuspected applications. Thus the Superior Council of Education, which plays an important part in the administration of that interest, is modeled on the French Superior Council; but unlike the latter, its membership includes the chiefs of other administrative bureaus, so that education is directed in full view of the interests of the commerce, of the agriculture, and the internal economy of the kingdom. So, also, in respect to manual training, which has great recognition in Japan, though the general idea and method are copied from the West, there is no servile imitation in respect either to the tools employed or the exercises followed. Only that is taken which can be skillfully adapted to native conditions and demands.

The system of education is thoroughly organized and carefully supervised. The minister makes frequent inspection tours for the purpose of seeing for himself the manner in which the education laws are carried out, and specialists from the Tokyo University, the Higher

Normal School, etc., are from time to time sent out to report upon the manner in which their special subjects are taught and to suggest improvements in methods or standards. These tours are quite independent of the regular inspection service, which is entrusted to men of approved qualification and distinguished rank, who are held to strict account for the discharge of their duties.

Education is compulsory for children between the ages of six and fourteen, or until a prescribed course of study is completed, which may be done in four years. Following this limited course of the "ordinary elementary school, which includes morals, the Japanese language, arithmetic and gymnastics, with a choice of one or more subjects—drawing, singing, manual work (for girls, sewing)—according to local conditions, there is a higher elementary school course extending over two, three or four years. The branches of the higher elementary schools include besides the continuation of those of the lower schools, Japanese history, geography, science, drawing, singing and gymnastics. In a higher elementary school having a course of four years, agriculture or commerce may be taken instead of singing, and the English language may be added.

The total number of elementary schools reported for 1902 was 27,010, the number of teachers employed in them, 102,700, and the number of pupils enrolled, 4,980,604. As the total number of children of legal school age (6–14) was 7,408,179, it will be seen that the enrollment was equivalent to 67 per cent of the school population. For the training of teachers for the elementary schools the government maintains 54 normal schools, having in 1902 1,032 teachers and 17,982 students, and 2 higher normal schools, having 118 teachers and 860 students. These higher schools, like the corresponding class of schools in France, are intended to train professors for the inferior normal schools. The latter graduate about 2,500 students annually, which does not suffice to meet the demand for recruits in a force numbering above 103,000. Great difficulty is experienced in getting enough teachers even from the ranks of the untrained, and strenuous efforts are now being made to provide larger facilities for training candidates who cannot be accommodated in the regular normal schools. Teachers' institutes corresponding somewhat to those of our own country have been organized, and more liberal salaries offered to attract young men and women to the service. Naturally the proportion of available women teachers is small, and the men are drawn off to other careers.

The solution of the difficulty lies evidently in improving the general education of women and accustoming them to the idea of professional life. The pressure for teachers is likely to be greatly increased

by the prospect of war, and added inducements will thus arise for improving the intellectual status of the Japanese women. The proportion of girls under elementary instruction is still much lower than the proportion of boys, the percentages to school population being respectively 81.08 per cent and 93.78 per cent. The proportion of girls enrolled to the total number of girls of school age has, however, greatly increased in five years, viz., from 50.86 per cent in 1897 to 81.08 per cent in 1902. The number of young women in the normal schools has also greatly increased in the same period, rising from 720 in 1897 to 2,000 in 1902; in the same time the number of male students increased by a smaller proportion, viz., from 6,200 in 1897 to 11,900 in 1902. There is also a noticeable increase in the number of higher schools for girls, viz., from 25 in 1897, with an attendance of 6,406 pupils, to 66 in 1902, with an attendance of 17,215 pupils. No one is admitted to the higher schools under 12 years of age, and who has not completed at least two years in the higher division of an elementary school. It is evident that in the solicitude of the government for the universal spread of education, the interests of women are as carefully considered as those of men.

While the government has been thus steadily extending the means of popular education it has made liberal provision for higher education, including under that term the very ample provision for general culture and research in two Imperial Universities, and in special schools intended to prepare experts for the service of the state. There are eight of these schools supported by the government and under the charge of the minister of public instruction, of which five are schools of medicine, and the remainder as follows: The Tokyo Foreign Language School, the Tokyo Fine Arts School, and the Tokyo Academy of Music. Besides the government special schools, there are four public and forty-five private schools of similar character. The lavish equipment and thorough organization of the schools of medicine are signs of the solicitude of the government for the physical welfare of its people. Only such students are admitted to the special schools of medicine as have successfully completed a thorough course of preparatory training. The course of study in the medical schools covers four years for medicine and three years for pharmacy. In addition to the professional branches of study there is a required course in ethics, and also in the German language. The report for 1902 shows that 99 instructors were employed in the five schools of medicine, and 2,028 students enrolled, of whom 1,889 were in the medical faculty, and 139 in pharmacy. The number of graduates for the same year was 307 in medicine, and 37 in pharmacy. It is specially noticeable that of these

graduates 28 were appointed as military or naval surgeons, 55 as physicians in hospitals, and 57 joined the army. The medical inspection of elementary schools, which is an important feature of the general system, offers a career for many medical graduates.

In the Tokyo Foreign Language School instruction is given in all the leading European languages, and also in Chinese and Korean, the course of instruction in each case extending over three years. The graduates of these schools find employment as government officials, and in banking and other business companies.

The University of Tokyo includes all the faculties recognized in Western universities except theology. The College of Science and Engineering has ample equipment for instruction in chemistry, pure and applied; in mining and metallurgy; in civil, mechanical, and electrical engineering. Of 406 students enrolled in the university in 1902, the College of Science and Engineering attracted 202.

The nine technical schools supported by the government include the Sapporo Agricultural School, the Higher Commercial School, and three institutes for the training of technical teachers. The remaining schools of this class pertain to the industrial avocations.

It is worthy of note that whereas twenty-five years ago Japan depended almost entirely upon foreign countries for its supply of professors and teachers, it is now able to recruit the teaching service from native scholars. The number of foreign instructors reported in government schools in 1902 was 66, of whom the United States furnished 12, England 15, France 5, Germany 21, and Russia 2.

The actual expenditure by the government for education in 1902 was 6,228,000 yen (about \$5,783,000).

#### MISCELLANEOUS NOTES

In its efforts to ameliorate the condition of its elementary school teachers, the French parliament has just abolished the clause of the law of 1889 fixing the proportion of teachers allowed in each of the six grades or classes established by that law. This removes the obstacle to promotion which has made the term "le pourcentage" the synonym of hopelessness in the teaching service.

The seventh annual congress of the "Deutscher Fortbildungsschul-tag" (German continuation schools) held at Hamburg in October last has just published an interesting report of its proceedings. The subject specially prominent in the papers read and in the general discussions was that of promoting social solidarity by means of the association and instruction of young people who have passed the period of school life and are on the eve of the full responsibilities of mature years.

The London County Council has authorized the London School Board to carry on until next April that part of its work which under the new law belongs to secondary education.

A. T. S.

## *Book Notices*

NOTE.—The number of books now published monthly is so large that we shall hereafter adopt the plan of promptly acknowledging by title, author, publisher and price, all books sent us for review; and later, as space is available, give more extended notice to such as seem most likely to be of interest and value to our readers.—PUBLISHERS EDUCATION.

**A Broader Elementary Education.** By J. P. Gordy, Professor of the History of Education in the School of Pedagogy, New York University. The old-time facetious remarks aimed at the narrowness and priggishness of schools and teachers must soon give way to a wholesome respect for the efforts made in the training of children if the appeals of the writers of to-day for a larger and broader education meet with a favorable response. In Dr. Gordy's latest book he impresses the reader at the start with the statement, "The art of living is *the* art, and whoever is ignorant of that, whatever else he may know, knows nothing to the point." This conviction is followed by a second; namely, that, "to contribute to this art there must be a broader education in the elementary schools." Those who have seen dire results from the enrichment of the program up to the present time, and who would cry, "Not more studies, but more study," are induced to consider the author's plan, since he vigorously asserts that, in his opinion, the Herbartian theory, which holds that everything should be made to depend upon interest, and that there should be no must in education, is a thoroughly pernicious one. And could the most conservative devotee of the three R's find any flaw in the claim that, "The elementary schools can intelligently have in view such ends of liberal education as thought, appreciation of beauty, loyalty to duty, affection, and sympathy"?

Dr. Gordy shows no rash haste or dogmatic tendencies in coming to his conclusions as to what will bring about a broader elementary education, but carefully weighs the educational value of each grammar school subject. These chapters are most suggestive in pointing out the large lines along which the subjects can be made of benefit, and also in showing that much, upon which in the past great effort and long periods of time have been spent, does not develop either intellectual, emotional, or will power.

In the consideration of arithmetic, an interesting theory is stated, in fact a conviction of the author, that reasoning power gained in the study of mathematics is effective in such subjects alone, and of little value in other lines, such as history and literature; indeed, that "An increase of intellectual power may as certainly result from the study of a poem as from that of a problem in geometry." Added to his claim for the intellectual power gained from the study of literature, there must follow, also, the writer says, the cultivation of the emotions and the training of the will. Therefore, a triple plea is made for "the study which Plato said should dye the character so indelibly with a love of the principles by which life is to be guided that all the temptations to which life may be subjected will not avail to wash out."

Not alone for improvement does Dr. Gordy regard literature as an important subject in the curriculum, but also because of the pleasure derived from it. Since he has said that education should be a training for the art of living, the following is quite what we should expect, "The delight and appreciation of

beauty is one of the ultimate ends of life, one of the things that make life worth the living." All this in favor of the study of literature presupposes his attitude toward that of reading *per se*. Indeed, he makes the graduate's taste in reading, and power to assimilate what he reads, the criterion of the value of the school. "He who leaves school with his taste so cultivated that he can discriminate between good books and bad, and with his powers so developed that he can assimilate what he reads, has the essentials of an education; while he who cannot do this is at bottom an uneducated man, no matter what universities he may have attended or how many degrees may have been conferred upon him."

The æsthetic interest alluded to in the chapter on the study of literature is again discussed in that on the value of nature study. It is argued that if a choice need be made between a scientific and an æsthetic interest it would be wise to sacrifice the former to the latter. In favor of nature study a strong point is made of its power to cultivate in the student an open-mindedness to truth, which will tend to overcome any undue confidence in his own opinions. In this connection it is suggested that biographical studies of scientific men accompany the nature study, that their long and patient search for truth may be observed.

Manual training is advocated both for its own sake and for the influence it should have in producing an increase of respect for work. The other subjects in the curriculum, spelling, geography, and the rest, are similarly treated, fairly, and from the point of view of his great principle that education is for the art of life. A course of study, not in detail, but built on this ideal, is laid out for primary, grammar and high schools. A large portion of the book is devoted to the main principles and methods underlying all works of education, those which are entirely practicable for every worker with children and for those who have any connection with the educational policy of the communities.

There are chapters on Democracy and Education; the True End of Education; the Function of Imitation; Should Reading be Taught before the Age of Ten? Departmental Instruction in the Grammar Schools, etc. These are in addition to the chapters already mentioned, on the educational value of the various subjects in the curriculum, chapters particularly interesting and suggestive to the lay reader and full of hope and inspiration for teachers. The book is refreshingly free from pedagogic bigotry, the subject having been looked at from the outside rather than from a deep-worn rut in the profession. It is to be hoped that the book may reach many parents as well as teachers, since it is their sentiment and influence far more than those of teachers which can form and re-form the educational situation in city or town. Hinds & Noble.

**Pioneer Spaniards in North America.** By William Henry Johnson. The publisher's summary of this book is so excellent that we transcribe it as it stands, only adding that we are sure that all teachers of American history, as well as the general reader, will find this one of the most interesting and valuable contributions of the year to the early history of our country. "In his new book the author of 'The World's Discoverers'—a book warmly commended by high authorities—takes up the story of Spanish exploration and conquest in the period immediately succeeding the discovery of America. The first persons appearing in its pages were companions of Columbus. It traces the gradual spread of Spanish conquest and colonization from the islands of the Caribbean to the mainland, relates the brilliant but tragic career of the discoverer of the Pacific; sketches the astounding achievement of Cortes in winning for Spain

the ancient empire of the Aztecs; follows into the mysterious interior of the vast continent those dauntless adventurers, De Soto and Coronado; tells with vivid interest the stirring tale of early New Mexico; and, finally, brings together in the Appendix a mass of information, especially valuable for teachers, on the social life, religion, industries, and arts of Ancient Mexico." Little, Brown & Co. Price, \$1.20 net.

**First Lessons in Finance.** Second edition of "Funds and Their Uses." By Frederick A. Cleveland. In D. Appleton & Co.'s well-known, comprehensive Twentieth Century Text-book Series. In his preface the author says: "Except in its public aspects the subject of finance has received little attention at the hands of writers. The necessity for funds with which to carry on King William's war with France gave rise to the Bank of England, and with it to modern funding methods." The divisions of the book are: First, What are Funds? second, How Funds are Obtained; and third, Institutions and Agents Employed in Funding Operations. The subject is a most practical and important one, and no person can be considered well educated until he understands at least the more general facts, which are fully described and elaborated in the book. It is an excellent book for study in our high schools, whose graduates so largely go out into business life, unfortunately, with very insufficient knowledge of such practical matters as are here treated. There are many illustrations showing various facsimiles of bank notes, checks, bonds, etc. D. Appleton & Co. Price, \$1.25.

**Elementary Chemistry.** By Robert Hart Bradbury. The author presents a brief account of the present state of chemical science with a view to meeting the needs of those beginning this subject in secondary schools and colleges. It is the outgrowth of about ten years of high school teaching, and the author's work in the classroom along original lines, through which he has sought to present the whole subject as it is known at the present day, contributes to make the book original. It seems to cover quite comprehensively this important science. There is a series of interesting portraits, showing some of the great workers in this field, such as Moissan, Priestley, Sir Humphry Davy, Rutherford, Lavoisier, Dalton, Liebig, Bunsen and others. The book should become popular with both teachers and pupils; first, because of its originality and scientific value, and in the second place because of its mechanical perfection and attractiveness. D. Appleton & Co. Price, \$1.25.

**Language Lessons and School Grammar.** By W. M. Baskerville and J. W. Sewell. The language lessons in the first book are simple and practical, presenting a great variety of material and introducing the elements of grammar in an easy way. Dictation exercises, picture stories, information lessons, exercises in letter writing, studies in poetry and prose furnish the greater part of the book, which is essentially introductory to the grammar. This latter book is a scholarly and lucid presentation of the science of our language. It presents numerous exercises to illustrate the rules, and these are stated in most carefully chosen words. It is a book of two hundred pages, but it gives the essentials of grammar, enough for the student in the grammar school. Both books are models of succinctness and clearness and will doubtless find favor in elementary schools. American Book Company.



**School Management.** By Samuel T. Dutton, Professor of School Administration in Teachers' College, Columbia University. Charles Scribner's Sons. Every teacher should own a copy of this invaluable book, and teachers' meetings would find it an excellent text-book for united study. All interests connected with school life, from the mechanical giving out of pencils to the growth of interior character of teacher and pupil, are here considered. The language is terse and strong, and nearly every sentence is a wealth of wisdom. The broadest view is presented of whatever subject is touched upon. For instance, "Physical education is no longer a matter of formal drill, but is related to the whole regimen of the child—his food, dress, bathing, sleep, his tasks and his games;" and this, "School management has to do with character in the making;" and this, "The management of the modern school . . . cannot be blind to any interest belonging to the moral and social welfare of the community." The keynote to the whole is the character-building of the individual, which makes for the maximum of his power as a social unit. Every teacher should be familiar with this work, and those to whom it is not an inspiration may be sure that they were created for some other work than teaching.

**The Book of the Short Story.** Edited by Alexander Jessup and Henry Seidel Canby. D. Appleton & Co., New York. This is a collection of some of the best short stories of all languages. They begin with an Egyptian papyrus tale (2500 B. C.), continue with the "Ruth" of the Bible, and range through the ages up to our Stevenson and Kipling. A list of representative tales and short stories is appended to each of those related, and lists of authorities on information regarding the literature and lives of the authors. General reader and bibliographer will find this work of importance and interest.

**Les Malheurs de Sophie.** By Madame la Comtesse de Segur. Edited with notes, vocabulary, questions in French, and English exercises, by Elizabeth M. White, and is one of the most delightful and charming reading books for first year students in French. D. C. Heath & Co.

We have received the following books for review in EDUCATION:—

*A Latin Grammar.* By George M. Lane, Ph.D., LL.D. Revised edition. American Book Company.

*Homeric Stories for Young Readers.* By Frederic Aldin Hall, Litt.D. American Book Company.

*National Educational Association: Yearbook of Active Members, 1903-1904.* Published by the Association.

*Addresses and Proceedings of the National Educational Association, 1903.* Published by the Association.

*The Being with the Upturned Face.* By Clarence Lathbury. The Nunc Licet Press. Price, \$1 net.

*Twentieth Century Text-Book: C. Sallusti Crispi Bellum Catilinae.* Edited by Alfred Gudeman. D. Appleton & Co. Price, \$1 net.

*Everyday English, Book II. Language Lessons for Grammar Grades.* By Jean Sherwood Rankin. Educational Publishing Company. Price, 50 cents.

*Elementary Guide to Literary Criticism.* By F. V. N. Painter, A.M., D.D. Ginn & Co.

*History of the United States for Secondary Schools.* By J. N. Larned. Houghton, Mifflin & Co. Price, \$1.40 net, postpaid.

*A List of Lincolniana in the Library of Congress.* By George Thomas Ritchie. Government Printing Office.

*A Calendar of John Paul Jones: Manuscripts in the Library of Congress.* Compiled under the direction of Charles Henry Lincoln, Ph.D. Government Printing Office.

*Shakespeare's Tragedy of King Lear.* Edited with notes by William J. Rolfe, Litt.D. American Book Company.

*The Natural Number Primer.* By David Gibbs, S.B. American Book Company.

*Colomba.* Par Prosper Mérimée. With introduction, notes, and vocabulary by Hiram Parker Williamson. American Book Company.

*Fifty Fables.* By La Fontaine. With introduction, notes and vocabulary by Kenneth McKenzie. American Book Company.

*Bunte Geschichten.* An elementary reader by Erna M. Stoltze. American Book Company.

*A Greek Primer.* By Clarence W. Gleason, A.M. American Book Company.

*Eclectic School Readings: Reynard the Fox.* Adapted by E. Louise Snythe. American Book Company.

*El Nino de la Bola.* Por D. Pedro A. de Alarcón. Edited with notes and vocabulary by Rudolph Schwill. American Book Company.

*Dona Perfecta.* Por B. Pérez Galdós. With introduction, notes, and vocabulary by Edwin Seelye Lewis, Ph.D. American Book Company.

*Field and Laboratory Exercises in Physical Geography.* By James F. Chamberlain. American Book Company.

*The Louisiana Purchase.* By A. E. Winship and Robert W. Wallace, A.M. A. Flanagan Company.

A list of books (with references to periodicals) on the Philippine Islands in the Library of Congress, by A. P. C. Griffin; with chronological list of maps in the Library of Congress, by P. Lee Phillips. Government Printing Office.

### Periodical Notes

Notable among the articles in the January *Pacific Monthly* is that by R. H. Kennedy, under the title, "Money in Trees." The timbered area of Oregon and Washington is equal to the whole of New England and two thirds of New York. The trees of this section will cut of good merchantable timber 450,000,000,000 feet. In Oregon alone, according to estimates of Government forest experts, we have 335,000,000,000 feet.—The curiosity which has always existed concerning Tibet by reason of the exclusion of foreigners has given special interest to any addition to the world's meager knowledge of that country, particularly of Lhasa, "the forbidden city." This curiosity is now greatly enhanced by the political situation which has in it the possibility of a clash between Russia and Great Britain concerning Tibetan affairs. That Russia is alive to her own interests in this quarter is shown in an article in the January *Century* entitled "The Latest News from Lhasa."—The *Designer* for February is a complete success from both the artistic and literary point of view. "Raffia Work," "New Stitches for Afghans," is an article which will interest some of our readers.—The February *Delineator* is a magazine of uncommon interest and value. Its stories, articles and pictures are excellent.—Prof. A. D. F. Hamlin contributes to the January-March *Forum* a survey of recent tendencies in "Architecture." Among the subjects treated are the relation of architecture to economic movements, the merits and defects of the *art nouveau*, and architectural competitions for the erection of public buildings.—Dr. James J. Fox contributes a most interesting and learnedly critical review of Mr. Gladstone's life to the pages of the January *Catholic World*.—William Jennings Bryan contributes an article on "Farming as a Profession for the Young Man" to the January *Cosmopolitan*.—Mrs. Alice Meynell contributes to *Harper's Magazine* for February an article on "The Trick of Education," in which many inelegancies in the speech of both Englishmen and Americans are noted.—Nothing of the kind could be better than O. K. Davis' explanation of the issues between Russia and Japan in the December number of *Everybody's Magazine*.

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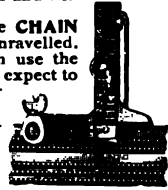
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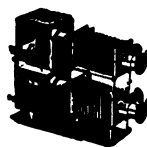
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## CONTENTS

|                                                                                              |     |
|----------------------------------------------------------------------------------------------|-----|
| Pedagogical Defects of the Sunday School, I. <i>Frederick E. Holton</i>                      | 380 |
| A Twilight Revery. (Poem.) <i>Elizabeth Porter Gould</i>                                     | 400 |
| The Education of Backward Children. <i>Jean L. De Forest, M.A.</i>                           | 401 |
| Music in Home and School. <i>George E. Crafts</i>                                            | 407 |
| Lessons in Genetic Psychology and its Relations to Modern Pedagogy,<br>II. <i>John Ogden</i> | 411 |
| Sensation in Plants. <i>Prof. W. Whitman Bailey</i>                                          | 423 |
| A Friend in Need. (Poem.) <i>Maryba Shepard Leppincott</i>                                   | 426 |
| The Use of the Model in English Composition. <i>Catharine A. Dale</i>                        | 429 |
| Editorial                                                                                    | 439 |
| Foreign Notes                                                                                | 444 |
| Book Notices                                                                                 | 447 |
| Periodical Notes                                                                             | 459 |

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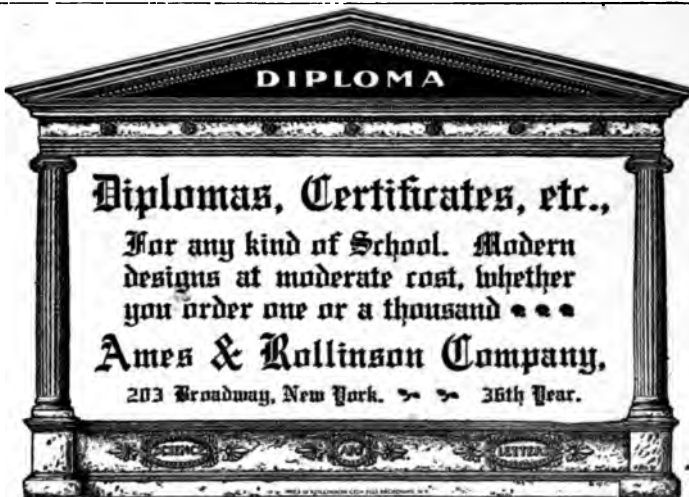
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In EDUCATION for April Professor Frederick E. Bolton, of the University of Iowa, will conclude his able paper on "Pedagogical Defects of the Sunday School"; and Dr. John Ogden will contribute the third paper on "Studies in Genetic Psychology and its Relations to Pedagogy"; Professor S. J. Hunter, of the University of Kansas, will write of "The Mean Proportional in the Problem of State Education"; Principal George A. McFarland, of the State Normal School, Valley City, North Dakota, will consider the topic "English as a Foreign Language"; under the heading "A New Educational Ideal," Professor H. M. Burr, of Springfield, Mass., will tell us of the interesting work of the Y. M. C. A. Training School in that city; Mr. Norman H. Crowell, of Sioux Rapids, Iowa, will tentatively answer the question, "What are Sun Spots?" and State Superintendent Walter E. Ranger, of Vermont, will consider "The Nature Study Movement." The usual departments will complete a rich number of EDUCATION.

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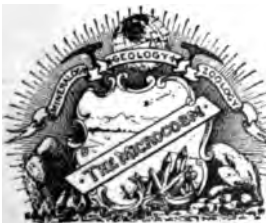
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VOL. XXIV

MARCH, 1904

No. 7

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## *Pedagogical Defects of the Sunday School*

FREDERICK E. BOLTON, THE STATE UNIVERSITY OF IOWA, IOWA CITY

### I



RELIGIOUS training can only be intelligently administered when understood in the light of the other phases of education and in harmony with them. All true education rests upon fundamental principles which cannot be overlooked or violated without producing distorted results. Mere zeal or good intentions in education cannot take the place of an intelligent recognition of its foundation principles. Education is a process of adjustment to environment, and hence includes more than mere instruction in certain arts, sciences, or cults. It includes all the forces that are brought to bear upon an individual. The principles of education then must be gleaned from a study of man and the forces that are operative in shaping his destiny. This means a study of man's physical, intellectual, moral, and affective nature, and the study of the forces that shape civilization. In brief, in examining the problem of education we must view it in the light of psychology, biology, sociology, and history. Now, if our assumption is true that religious

education is but a phase of the general problem, then we must agree that the preparation for religious teaching must include all of the above directions of training, and special emphasis must be directed toward understanding religious emotions and the means of awakening them; toward means of practical application of religious doctrines; and toward an understanding of religious history or the record of religious evolution.

We are ready enough to acknowledge that religious training is of paramount importance for children, but we seem to forget that such instruction demands the very best teachers in the whole circle of school instruction. While we count it the highest cause, we exact the least in the way of preparation of those to whom it is entrusted. Anybody who wishes may be commissioned with these grave responsibilities. Even Dr. Nehemiah Boynton said that the only requisite of a Sunday school teacher is that he be a Christian. "For a great Christian will be a great Sunday school teacher, even though that teacher be unable to read or to know the letters of the alphabet, because that Christian will have the practical experience out of which to develop the souls put into his care and keeping." (Report of Committee of Education, 1896-7, I, page 400.) Now, while Christian example and zeal should be a *sine qua non* in a Sunday school teacher, it no more follows that he will be a successful teacher in a Sunday school than in a day school. His example and inspiration should be very potent in influencing his young flock, but he is only one person out of hundreds who directly or indirectly touch the lives of the young people. One of the functions of the teacher is to influence his pupils through the forceful portrayal of others' lives as chronicled in literature. To do this successfully he must understand that literature and also the nature to be influenced, the laws of his growth and development, and laws governing presentation of facts. Otherwise serious blunders are imminent. Conviction and change of heart (sentiment) are to be brought about through knowledge of facts, and ignorance of facts or laws of teaching can no more be offset by religious fervor than interest in humanity could make a good teacher for a secular school out of an illiterate person. It is the high privilege of all teachers in day schools



or Sunday schools to use the great truths as gleaned from literature, art, science, and nature in shaping righteous character. He who is ignorant thereof curtails his powers. Mere erudition, it is true, will not make one a successful teacher, but to be devoid of proper scholarship and professional equipment is to be equally one-sided. The great preachers of to-day are men of scholarship and technical preparation in addition to natural endowments and religious zeal.

The defect suggests the remedy. Sunday school teachers should be mature persons, scholarly in tastes, who have received a liberal education, who have studied the science and art of teaching, and who have made thorough preparation for this special form of teaching. That is, in addition to all the prerequisites for the general work of teaching, there should be added extended academic study of biblical and church history, and the methodology of its presentation. From the very nature of the work the teacher should also be in touch with the problems of the present day, in order to help in the intelligent application of abstract principles of righteousness. This would mean about the same preparation as should be demanded for preaching. Unfortunately, even of this class, psychological, sociological, and pedagogical training are not demanded in many of the theological seminaries. The chair of scientific pedagogy should be as usual in theological seminaries as the chair of Bible exegesis. My ideal Sunday school teacher then, the same as the minister, should be equipped with a diploma from the best theological school. But, you say, that is utterly impossible. They could not afford such a course. I grant that it is true under present conditions. But pray, why not enable them to afford to prepare for so important a work? That is, pay them. So contrary to custom is this that it may sound strange, but why not pay spiritual teachers of the children as well as the spiritual leaders of older people; that is, the ministers? Youth is the nascent period for the appearance of the religious instincts. The majority of real conversions occur before eighteen. Seldom do permanent changes occur afterward. Now, we pay ministers for trying to do what is impossible, while we trust the great possibilities of childhood and youth to the chance influence of well-meaning but untrained teachers.

If impossible to have a complete supply of thoroughly trained teachers, there should be at least one for superintendent of the school, or group of schools, who should be as well paid as the pastor, and who should devote his whole time to instructing the teachers and superintending the work. By suitable payment for the Sunday teaching then in every community there could be found public school teachers and others of liberal training who would be willing to take a systematic course of serious study, academic and pedagogical, under the superintendent. An examination as to fitness should precede engagements for the work. Prof. Nicholas Murray Butler says, "Sunday school teachers should be led to look upon their work, not as philanthropy, nor even as missionary work, but as something which is larger than either because it includes both, namely, education." The Rt. Rev. Wm. Crosswell Doane, Bishop of Albany, said: "No Sunday school is complete, or is in the way of large accomplishment, that is not preceded and prepared for by the Rector's class for his teachers. Bible study with all its sidelights, yes, and with all its footlights, of technical and textual criticism—Bible study, critical and devotional, is the great desideratum of our day." (*Principles of Religious Education*, pp. 40, 41.) Luther said: "I would that nobody should be chosen as a minister if he were not before this a schoolmaster. . . . A bishop ought to give proof before being a bishop that he had aptness to teach."

Without doubt the methods of teaching in the Sunday school are exceedingly unpedagogical tested by modern educational standards. In the first place the teachers are not trained in the special pedagogy of religious teaching, many not being trained for any sort of teaching. The work of teaching classes on Sunday being entirely subsidiary to other work of the week, the preparation for this is put off until the last minute. Even with an attempted careful study immediately preceding the presentation of the lesson, so few possess any outlook over the whole field that the immediate preparation leads to no independent point of view. Suppose one attempted to teach astronomy without having spent years in a view of the whole subject; would an hour before class equip one as a real teacher, a leader?

No person is equipped for teaching until he has (1) mastered the subject matter which he is to teach; (2) until he has become conversant with the fundamental laws governing mental action and mental development; (3) until he has mastered the methodology of the presentation of the subject. The Sunday school teacher should possess a knowledge of the subject matter of instruction so exhaustive as to give independence and breadth of view. No mere parrot knowledge of the Bible can suffice. To be fortified on the subject matter there should be included thorough instruction in the Bible, a large fund of knowledge of general history, especially ancient history—Jewish, Greek, and Roman. Then, not to know the history of the Church clear on through the Middle Ages, and including the Reformation, is to leave the ancient history suspended, as it were, in mid-air. The Church history during the Middle Ages is an immense subject—just think, it means the history of the state, the history of schools, the history of universities, the story of the monastic orders, the Crusades, the growth of art, architecture, trade guilds; in fact, the history of the Middle Age Church is the history of Middle Age civilization. The Church was the institution which alone arose out of the ruins of the older decadent civilization. The individual subordinated himself completely to its interests. Its ideals became his ideals. Her philosophy became his. Her commands, his excuse for every action. Now, all this must be thoroughly understood by the Sunday school teacher, if she would give a complete understanding of the stability of the Church universal. No better examples could be cited of the power and stability of the Christian Church, and no nobler examples of Christian heroism and self-sacrifice, than are to be gleaned from this post-biblical period. To complete the evolutionary view the teacher should understand post-renaissance Church history, also. The later struggles in England, Scotland, Ireland, Germany, and America should be carefully studied, and also tendencies of the present. This all means essentially such a course as is given in theological seminaries, or such as ought to be given. It is not expected that all this is to be taught to children, but any teacher needs a much broader

knowledge of subjects than he is expected to teach. In order to teach properly he must have perspective.

Much Sunday school teaching is unpedagogical in that it does not obey the psychological law of apperception. New knowledge can only be interpreted in the light of old knowledge already in the mind. Those phenomena which are so remote from any experiences we have had that they do not awaken a sense of familiarity are passed by without notice. Further, when new knowledge is presented that is foreign in all particulars it fails to be understood, or even to excite any interest. We are told that some Esquimaux on being taken to London to view the sights and receive a great treat were interested in nothing, and were filled with disgust, which was only dispelled when they accidentally came upon some boats and fishing tackle that resembled products of their own manufacture.

The child is plunged at once into Old Testament history, which deals with life-scenes finding little or no correspondence in present day life with which he is acquainted. Even the language through which they are supposed to be made acquainted with biblical people and customs is foreign in its construction. Instruction to be assimilated must be given from the child's plane of experience and activities of immediate life. To depart from this is to touch no responsive chord in the child's mind. What may be a logical procedure for the adult mind may be far from a psychological procedure for the immature mind. The alphabetic method is the most logical method of teaching a child to read, but at the same time the most unpsychological. Again, in teaching a child the very beginnings of botany a logical method would necessitate beginning with the seed, but it is more pedagogical to begin with the flower, because it excites interest. Wherever logic and proper interests clash, logic should give way. Likewise, chronology should be largely ignored in teaching small children. They know neither time nor space in story. Henry Lincoln Clapp says, "It should not be taken for granted that the teacher's sequences laboriously studied out are the pupil's sequences, or that he can assimilate them." Ufer says, "A fruitful treatment of Bible history during the first two years is not practicable on account of difficulties

which lie chiefly in the remote time, with its social forms, institutions, manners, customs, laws, etc., and in the strange arena of this history, without the knowledge of which history hangs in the air, a picture consisting of figures without any background." (Introduction to the Pedagogy of Herbart, p. 67.)

The Westminster Review some years ago contained these words: "Theology should not be forced upon the child's mind at a very early age. . . . A child's first idea of spiritual things, if these are presented to him in the phraseology usually employed for the purpose, is necessarily a false one, made so by his natural substitution of the concrete for the abstract. This fact often receives its confirmation from the quaint notions children are found to have formed about religion."

❖ We constantly appeal to the child upon the adult plane. We expect him to comprehend the complex abstractions and conventionalities of which we speak in almost an unknown tongue to him. Christ as a teacher was far wiser. Notice how he selected his illustrations from the every-day life of his hearers. Himself a carpenter, he never used illustrations from that occupation, but he recalled their experiences as shepherds, as husbandmen, as fishermen, etc. Illustrations leading up to great truths were always selected from experiences near at hand. He recalled the sparrow, the ant, the fox, the lily of the field, the seed time and harvest, the sower who went forth to sow, the manna in the wilderness, the widow's mite, the Pharisee and the publican,—objects with which they were all familiar.

Should we not begin our instruction of the child with personal experiences familiar to the particular children taught, and make the teaching radiate from those? The point of contact for the city child is of one kind and for the country child another. Imagine the city child struggling with the verse, "The Lord is my shepherd, I shall not want." The metaphor suggests imagery entirely foreign to him. Canon Tristram relates of his missionary work in Ceylon that he was once "addressing, through an interpreter, a large congregation of native Christians, and, unfortunately, chose the subject of the Good Shepherd. My interpreter told me afterward that not one of my hearers had ever seen a sheep, or knew what it was. 'How,

then, did you explain what I said?' I asked. 'Oh,' he replied, 'I turned it into a buffalo that had lost its calf and went into the jungle to find it.' This interpreter probably knew nothing of the science of teaching, and yet he had an instinctive sense of the principle of the point of contact on the plane of experience." (Du Bois, *The Point of Contact in Teaching*.)

Are we not in too much haste in attempting to teach the divinity of Christ and the necessity for his suffering, death and resurrection? Should we not lead children to love Christ through his human character long before we thrust the idea of the atonement upon them? Jesus as a man is attractive to children of all ages. Religious teachers are usually so anxious to present Jesus as a divine person, and children's minds are so unable to grasp the mystical implications of this dogma, that the human Jesus is taken away from them, and the divine Jesus is made an intellectual abstraction. The result is that the child can love neither the one nor the other. This religious forcing will inevitably shift the interest of a child to a character whose humanity it can understand and love. This Dr. Starbuck believes will account for the preference which so large a percentage of girls show for John the Baptist rather than for Jesus.

We should avoid teaching the child the idea that God is a judge or a policeman, spying upon him to discover his misdeeds. Retribution becomes often the only characteristic of the God of the child. The child may easily be led to think of Him as merely an adjunct to the disciplinary arrangements which he finds about him. We too early try to foist upon the child the doctrine of the fall of man, universal sinfulness, and the necessity of conversion. None of this does he feel, and he either becomes rebellious, an unbeliever, or is seemingly filled with respect, though really with fear and repulsion. The child does not feel the necessity for contriteness of spirit and a change of heart.

We have been altogether too much concerned with teaching children a doctrine of redemption, a doctrine of reformation, when we should have been teaching the doctrines of formation of character. We have been too anxious to impress the doctrine of original sin, and too little concerned with developing

the original divinity, which every scientist believes to be a part of the heritage of every human being. The proportions of original sin and original divinity depend upon the particular line of ancestry. Froebel and Rousseau even believe that the divinity in childhood is the chiefest thing in childhood, and it becomes sullied only through contamination. Be this as it may, we have spent too much time in teaching the necessity of salvation and conversion, and too little in teaching the virtues and beauties and loveliness in the character of the meek and lowly Jesus; we have spent too much time in teaching the method of preparing for a world to come, and too little in helping children to live Christ-like lives. It is much the same in secular education. Men vote without murmur millions of money for reformatory institutions, while they continually grumble at paying even the paltry sums for the support of formative measures. Formation, and not reformation, should be our watchword. Undoubtedly one of the greatest factors contributing to the success of the Y. M. C. A. is just this very recognition of the value of formative influences rather than reformatory doctrines. Along with this they recognize what the Sunday school should also attempt to secure to a greater degree, viz., redemption through works rather than through faith alone.

A literal teaching of biblical history and the use of many Sunday school songs accentuate the necessity of the desolation of life, submissively waiting, even longing, for release from life and the entrance to glory. What could be more unnatural to children? I do not wish to be misunderstood. The thing I desire to guard against is religious forcing, and I wish to raise my voice against it on the same grounds as against precocity or abnormality in any direction. This is a question of pedagogy and not of doctrine. However great the desirability of teaching the doctrines of the atonement, the fall of man, the retributive function of God at some time, childhood is not the place. I believe that in my own evolution I was made a moral coward from the age of seven to seventeen through the too great accentuation of such teachings as I have mentioned, aggravated by the too early attendance upon the old-fashioned revival meetings, where religion was preached as a means of

escape from punishment. I honestly strove for that subjective change which I was told would come, and was for years inexpressibly unhappy, filled with horrible fear by day and by night lest God should visit his wrath upon me. I believe honest confession would disclose multitudes of parallel cases. Why can we not teach the love and fatherhood of God, the brotherhood of man, and fill the mind with high and holy aspirations, and through habit have Christian actions become thoroughly ingrained?

Conversion as such which involves all the foregoing attributes in greater or less degrees should not come before adolescence. At that time there is a natural, a normal re-birth of all powers, bodily and psychic. The mind naturally raises the great questions involved and seeks answer. To seize upon a nascent period of questioning for giving answer is high pedagogical art. To force questions upon the mind before it can grasp their significance is dangerous in the extreme.

In the upper classes altogether too little is made of the geography of the Holy Land and adjacent countries. The conception of the comparative locations which the ordinary pupil gets from Bible study as carried on in many Sunday schools is about as definite as his ideas of heaven. He scarcely regards Palestine as a real country. But he ordinarily thinks of the history of the Holy Land as dissociated in time and space from all other events. Biblical scenes were simply enacted sometime, somewhere; he almost conceives it as a world apart, and hence never conceives Christ and Christianity as realities. They are something which he almost superstitiously avoids as sacrilegious to connect with things earthly. This unnatural teaching leaves its impress all through life in making Christianity a thing apart from other relations of life. It remains a matter of ritual and form, too sacred to be mixed with business. Because of the unnaturalness men learn to fear the Lord, but not to love him. There is no difficulty in making children love George Washington, Abraham Lincoln, William McKinley; but of how many children can it be honestly said they love John the Baptist, David, or even Jesus?

Bible history work in the lower grades of school up to the



age of ten should be largely in the form of biography. Like all biography in this early stage it should be presented for the sake of arousing an interest in the characters who represent ethical or Christian ideals toward which we wish to have children strive. They should deal with concrete and specific phases of character which children may love and emulate. The less abstract the ideals the better. If too abstract they are not understood. Such biography, like children's fairy stories and mythology, should have little reference to chronological sequence or exact location. "Once upon a time" is the form the child loves, and really the virtues exemplified should be universally desired, and the vices universally hated.

Real history which deals with specific time and space and definite chronological sequence should not be taken up in the Sunday school until about the time it is begun in the day school, *i. e.*, at about the age of ten or eleven years. In my judgment exact chronological spatial relations might be deferred considerably longer.

Much that is in the Bible must be omitted in teaching children. First, because it is not all adapted to their understanding, and second, because some parts are undesirable for children to know. Bible stories and mythology should be much more thoroughly expurgated than has been customary. Patterson Du Bois, than whom there is no one more truly desirous of securing Christian growth in children, says that the value of Bible stories is very positive in giving ideas of personal relations centering in the God-ward. But he adds: "The stories must, however, be wisely selected. . . . The continuous depicting of bloodshed and horrors in the illustrations given in certain Bible story-books for children is simply barbarous. A child should not get as a dominant thought of God the idea of retribution, of killing, warring, etc. . . . Nor ought early impressions of God's Book to consist mainly of such things as are repellent to a sensitive nature, especially in its most impressible period. The child cannot have sufficient knowledge of situations and of sociological conditions to justify a repeated exhibit of vengeance and horror. For like reason the physical sufferings of our Lord on the cross must not be too eminently pictured, and his death ought seldom to be mentioned apart from his rising again."

President Eliot, of Harvard, in estimating the value of much classical literature, including biblical literature, for children, wrote: "I cannot but think, however, that the wholly desirable imaginative literature for children remains, in a large measure, to be written. The mythologies, Old Testament stories, fairy tales and historical romances, on which we are accustomed to feed the childish mind, contain a great deal that is perverse, barbarous or trivial; and to this infiltration into the children, generation after generation, of immoral, cruel or foolish ideas, is probably to be attributed, in part, the slow ethical progress of the race. The common justification of our practice is that children do not apprehend the evil in the mental pictures with which we so rashly supply them. But what would we think of a mother who gave her child dirty milk or porridge on the theory that the child would not assimilate the dirt. Should we be less careful of mental and moral food materials?" (Charles W. Eliot, *Educational Reform*, p. 404.)

*(To be continued.)*

### *A Twilight Revery*

Outlined against the twilight hue,  
On yonder quiet hill,  
The passive trees are swaying, singing,  
In love with Nature's will.  
Swaying—singing—  
Singing—swaying—  
Their destiny to fill.

So 'gainst the sky of fate and chance,  
Or pain that doubts instill,  
The trustful hearts are praying, planning,  
Harmonious with God's will.  
Praying—planning—  
Planning—praying—  
Earth's mission to fulfill.

ELIZABETH PORTER GOULD.

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## *The Education of Backward Children*

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VERY teacher is confronted by a number of definite problems which she shares with teachers in general, and which she solves according to her own ability and the particular needs of the case. Perhaps the greatest problem is presented by backward children, of whom no teacher can hope to steer clear. I do not class among these, children who, from brain malformation or sheer naughtiness and inattention, are behind others of their age; I mean, rather, that patient assembly of little ones who give minute attention, are slow of speech, seem never quite to grasp the problem in hand, and are incapable of memorizing a rule correctly. They take hours to do work cast off by their more fortunate classmates in a few moments, and suffer secretly over low marks, to which they seem doomed. Ten chances to one they blossom out, years later, into the great men and women of their generation, while the honor boys and girls pass into oblivion. There must be some explanation, and there must be some way to help them.

Several children of this description have come to my notice since I began to teach, and after considerable experiment I built up a method which, in the study of English at least, has brought excellent results. It became impressed upon me that the fundamental lack in the children under my care was lack of memory; that is, memory pure and simple, the memory that recalls a printed page, or the exact words of a poem, whether it is understood or not. If these same children could once grasp the real meaning of a rule they never forgot it, while the bright pupils found it necessary to refresh their minds at intervals, and were much assisted by recalling its exact position on a page.

Few of us grown-ups realize the enormous number of radiations from even the simplest statement, if we stop to analyze it. Many of us would be much taken aback if suddenly requested

to explain the terms "art," "rule," "law," or even "sentence." Can we wonder, then, that there are some children who, failing to understand these and similar terms, find it impossible to stow them away in their minds, and therefore continue in ignorance?

In order to bring the study of grammar entirely within the comprehension of my class of girls, who averaged in age thirteen, I was forced to go through the following discussions. Upon the first day the meaning of "law" came under consideration. The answers were manifold. "Something you must obey," "a rule," "the ten commandments," "something written in a grammar." Finally I gave this simple definition, "Law is the way in which things must act in order to produce a certain definite result." This was incomprehensible until I drew out by much questioning the fact that a law always seemed to be made for some definite purpose. For instance: the law of gravitation brings it about that things heavier than air fall. The fall is the end for which the law is created. If we hold fast to a heavy body, or hang it on a hook, we hinder the action of the law and it will not fall. Then we considered the law that governs the acorn. The end or desired result is the oak tree. The law contains in it certain conditions of moisture, heat, soil. If these conditions are observed, the acorn grows and the definite result comes in the form of an oak tree. The little ones understood that if the acorn is pulled up, or is planted in water-soaked ground where it will decay, no result, that is no oak tree, can be hoped for. We took a large number of cases. They laughed when I asked them if they could pick violets from rose bushes, and by this time were very ready to say that they could not, because the law of the rose bush made roses come and not violets. After several such discussions I told them that all these laws—that of gravitation, of plant life, the law that governs moisture causing the sun to draw it up, only to let it fall later in the form of rain—are called "laws of nature," as are also the laws that govern our bodies. Certain poisons kill unless their particular laws are broken by antidotes. When asked who made these laws they answered, after a moment's hesitation, "God." We decided that this must be the case, because man cannot alter them, and only keeps well and progresses if he obeys them.

We spent a week, one hour each day, in considering law from various standpoints, and then I dictated the definition of law, which they wrote in their notebooks, with one or two illustrations, each child declaring that she understood it.

Our next step was the formation of a vocabulary. We took the four words used in the definition—produce, definite, certain and result. They knew that certain meant sure, but for the other three they had no explanations ready. We pulled the words apart with elaborate care, and found that they came from the Latin tongue and were full of meaning. *De* = a Latin prefix = about; *finis* = a Latin word = limits. Definite therefore must mean having limits about. A definite thing is a thing about which certain boundaries or limits have been placed, separating it from all other things. This brought us naturally to definition, a description of a thing that makes it definite or apart from other things. Prefix, from *præ* and *figo*; description, from *de* and *scribo* = to write concerning; produce, to draw out from, together with many other words, were taken separately and very slowly. We discussed every new word used in defining them, and searched for a few every-day words from the same roots. Right here we considered the meaning of infinite—not bounded—and the little minds found less difficulty in understanding the statements, “God is infinite,” “Man is finite,” than many an adult.

Proceeding in this way the children came to know that God made some laws which never change, and that man made other laws which do change. They understood that we could divide God’s laws into two classes: laws which govern conduct, that is, laws concerning right and wrong; and laws of nature, which no man can alter. No man can make murder right or charity wrong, neither could a man make a heavy body float about in the air without falling. Man’s laws are political laws, rules of health, laws of language, etc. Some of these were made to help men obey divine laws, such as rules of health; others were created simply for convenience. The laws of language come under this second head, and help men understand each other. That is the end for which they were made. Man’s laws are all subject to change, because man’s knowledge is not

infinite, and as he develops he changes the end he desires to reach or finds better ways of reaching it.

Space forbids that I should go into the manifold discussions in which the children grew interested, and which they fully comprehended. Whenever they became restive, I devoted the last moments of the hour to reading aloud from Hawthorne's *Wonder Tales*, or Kingsley's *Greek Heroes*. Sometimes the children learned poems, reciting them in concert or reading them aloud. They grew very fond of Shelley's *Cloud*, and delighted in explaining that he loved nature, especially its beauties, and that he saw in nature the existence of law. They understood that the cloud, clothed with beautiful pictures, was one of God's great laws—the law that governs moisture. They could compare Shelley with Wordsworth, saying that the latter always found a moral lesson in nature, and looked on her as a teacher. They learned the meaning of alliteration, simile, metaphor, pathetic, fallacy, and enjoyed the poems, just because they had something to watch for. They came to regard it all as a game. Every few days we formed a vocabulary from the poem to be read next, and the children received a thorough written examination each week on the spelling and definitions of these words. By the end of the first term these little girls could recite several verses of Shelley's *Cloud*, Tennyson's *Crossing the Bar*, and *The Brook*, Wordsworth's *Daffodils*, Byron's *She Walks in Beauty*, and Milton's *L'Allegro*. They knew the main characteristic of each poet, and the approximate dates of his literary work. They understood the meaning of each word in the poems, and the thought expressed in the poem as a whole. They were able to point out metaphors, similes, and various other rhetorical figures. All of this work, usually outside of the grammar class, appeared to the children as the reward of giving close attention to the more serious part of the work—that of grammar proper.

To go back a little: where the class could explain in child fashion the meaning of law and all that the definition implies, I brought in two new words,—science, from *scio*, to know; and art, from *ars*, work. They saw that if science means knowledge, and if knowledge necessitates a study of the laws pre-

viously discussed, then science, as a general pursuit, must mean a "study of laws." In the same way: if art primarily contains the idea of work, and if all good work is based on certain definite principles, then the space between science and art can be bridged.

Art takes the laws learned in science and puts them to practical use. It is a science when we study the laws of painting in order to find out how the great masters obtained their results, how they mixed their colors, how they produced certain effects in light and shade, but it is an art when we ourselves take up a brush, and obeying these laws try to gain similar results. In the same way it is a science to study the laws that govern language, to observe the way in which great writers expressed their ideas. It is an art when we ourselves take up our pencils and express our own ideas according to the laws that we consider best adapted to convey our thought.

I now dictated the two following definitions, which the children placed under their definition of law:—

Rhetoric is the science in which we study all the laws that govern language. Grammar is the science in which we study that part of the laws of language that treats of the sentence. Grammar, therefore, is a part of rhetoric.

After this, progress was rapid, and the terms used were rich in significance. The children had words in which to express themselves, and a host of examples. Three quarters of the difficulty in teaching, especially in teaching grammar, come from an ignorance of the meaning of single words. Teachers expect children to swallow rules whole, and to digest them, when, perhaps, they themselves could not explain three words taken separately.

One child had studied grammar a year before I took her in hand, and yet she made the most absurd mistakes. At last by giving her to understand that there was probably some reasonable explanation, she confided to me with shame and trepidation that she "got mixed up" as to which were nouns and which were verbs, and that she could never tell an adjective from an adverb. She had learned that a noun was the name of any thing, person or place, and that an adjective modified a noun.

She had not the slightest conception that modify meant to change, and that a modifier changed slightly the meaning of some other word.

Once again we turned to Latin derivations. We found that *nomen* meant name, that noun came from the same root, and that noun, name, and *nomen* all began with the same letter. We imagined a community of monkeys suddenly gifted with human powers of mind and speech. I asked them what words would appear first. The answer was clear,—nouns. They would indicate their wants by pointing at some object and making a sound, which sound would afterwards be used to indicate that special thing. Verbs could not be explained according to derivation, but the children saw clearly that action words must come next, in order to facilitate the rapid communication of ideas. The word adjective clearly came from *ad + jacio*, to throw at; adjective therefore could be explained by remembering that it threw more meaning at a noun. Adverb meant a word added to a verb—*ad + verb*—to slightly change its meaning. It may seem strange that, when such difficulty was experienced in memorizing, I should insist upon Latin roots and prefixes. As a matter of fact, these children found no difficulty whatever in remembering if it were for the purpose of explaining some knotty problem.

Our progress was slow but sure. The little minds refused to remember or become interested unless all the rules were rich in content and fitted together in one grand scheme. They simply could not absorb what Spencer, in his *Philosophy of Style*, calls “Isolated Dogma.”

Children of this type stimulate the teacher to her best work, and force her into minute explanations which perchance she never previously considered. The good effect of this slow training in reasoning on the bright minds, who could grasp rules in a superficial way and memorize enough for school purposes, can scarcely be measured. It produces habits of careful thought, and makes them read slowly what they previously skimmed over in a few moments.

This discussion might be carried on *ad infinitum*, but enough has been written to define the problem and suggest at least one method of solution. I firmly believe that part of the failure to develop slow-thinking children lies in the inability of the teacher to satisfy the demand for full explanation.



## *Music in Home and School*

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Some thoughts along the line of musical development, suggested by the addresses and discussion during the National Educational Association and other educational meetings held during the past summer.



THROUGHOUT the educational meetings the steadily increasing recognition of the influence of music upon mind and character was very much in evidence; and one way in which it was shown was the apparent certainty that very soon some proficiency in the knowledge of music would be accepted as a qualification for admission into the colleges, and already in many, including Harvard, it stands on the same basis as regards credits as any other study with the exceptions of English, literature, and mathematics.

This will have a marked tendency to make the teaching of music in public schools much more general and of a higher character; and one marked improvement is in requiring individual recitation in singing as well as in regard to the rudiments of music, which method is being adopted in many places.

This was finely illustrated at one of the sessions of the National Educational Association by a class of ninth grade pupils: girls, and boys also whose voices had recently changed, sang alone, at sight, exercises of more than ordinary difficulty before an audience of about a thousand people, most of whom were supervisors of music in schools.

Another thought which was emphasized was the need of more careful treatment of the voice than is now evident in our school work. An intelligent teacher uses the syllable "loo" or "oo" for vocalization with a certain class or individual to accomplish a certain result; another teacher, knowing this, will use it constantly and indiscriminately, without regard to need or result, until enunciation and tone quality have been ruined. This is one illustration of many that might be given.

Many supervisors have never studied vocal culture; others have not studied to advantage; and both classes are totally unfitted to train the child voice, which work is of supreme importance.

Year after year the voices are deteriorating until in such a community a singer would be a singular rarity; whereas if music were properly taught the most splendid results in vocal culture and singing might be accomplished.

One advanced thought, which was dwelt upon at length, was the fact that modern psychology recognizes that the best method of teaching is to develop knowledge from material stored in the sub-conscious mind; for instance, children at first should sing constantly beautiful songs, unhampered by a single thought of rudiments, and should also have the privilege of listening to good music, and thus unconsciously acquire a vocabulary of musical expression and a discerning and cultivated ear, developing the expressional and impressional faculties equally.

When the time arrives that this knowledge should become conscious, and some group of notes is called to their attention, as do, mi, sol, do, they instantly recognize it as a part of many of their beautiful songs.

The supervisor of music of the schools of St. Louis, in an informal address, said, "What we need to-day is the training of cultivated listeners."

If we will give the subject thoughtful attention we will agree with him. How many enjoy the really good music? How many can listen to a Boston Symphony Orchestra program with concentrated attention and pleasure? If the proportion is shockingly small in Boston, with all its unsurpassed advantages, what must it be in smaller places where they are less numerous or perhaps entirely lacking?

The supervisors in schools were called upon by the speaker from St. Louis to materially aid in changing this deplorable condition. How shall it be done?

The experience of the summer has suggested two ways to me in addition to those we commonly use. Prof. Leo R. Lewis, director of music at Tufts College, in speaking of developing a love, appreciation, and knowledge of standard music, called the

attention of the summer school to the immense usefulness of the better class of self-playing instruments, such as the mechanical piano players, and also the reed instruments for producing orchestral effects, such as the *Æolian*.

Tufts College owns one of the latter, the use of which is enjoyed by the students. They have access to the large collection of the circulating library, and the college owns many standard compositions—Beethoven's symphonies being on the list. Can one fully appreciate such music, hearing it played, as those most highly favored, once in two or three years?

Some of the students study these by running them through the instrument nearly every day for weeks, and then when they are familiar with every note, and the composition has become a part of themselves, who can estimate the keen enjoyment and uplift when they hear these performed by such an organization as our Boston Symphony Orchestra.

To many of us who listened the use of such instruments for the study of standard music was a new idea, and all felt that we would secure one at the first opportunity for our own home and schools.

On being questioned, Professor Lewis stated that in his opinion the most practical instrument for schools would be the piano player, as it was less expensive and easily transported from one building to another. What an inexpensive and yet wonderful help it would be in developing a cultured musical taste and keen enjoyment in something so elevating and refining in the people of this country as they pass through the public schools.

I visit occasionally a home in a town where opportunities for hearing good music are very limited, but where in spite of this fact, and also that the members of the family are not musicians, they have acquired a very cultured musical taste, and are more familiar with good compositions than many who have studied music for years. For some time they had the best of Edison's phonographs, and this year I found a fine gramophone, with a much choicer class of music than formerly.

To me the most interesting feature was the interest manifested by the little two-year-old daughter, who listened with pleasure and intelligence, as was shown by quick recognition of many

selections, lisping the titles and singing some of the melodies after the instrument had ceased.

What a field of thought is thus opened up—a child from its infancy living in an atmosphere of the richest music, performed by the finest artists and musical organizations in the world. Will it fulfill the desire of the supervisor from St. Louis and become a “cultivated listener”? Will it have a musical vocabulary for self-expression which will give to its own performance an added excellence?

We listened to standard overtures as performed by some of the leading orchestras in the United States; then to an exquisite violin solo by the matchless Kubelik, with its perfect technique and delicacy of finish; to the Jewel Song from *Faust* by Suzanne Adams, of which one would never tire. Solos, duets, and quartets by splendid male voices, with perfect intonation and superb style, followed in endless variety. Most people would otherwise never in a lifetime hear such music or such artists.

When I think of the elevating and broadening influence of good music my desire is that the people may enjoy it more and more; and until some better way for providing it is devised let us make the most of these mechanical devices in the home and in the school, and very soon Creatore's criticism that “In Italy the crossing sweepers are more critical listeners musically than the concert attending people of the United States,” would be without foundation.

Would this tend to decrease the number of performers? I think not; but in case it should, the quality would be so very much improved that we would not be the losers by the decreased number.

God speed the day when music shall occupy the exalted place it merits because of its eminent beauty and usefulness.

## *Lessons in Genetic Psychology and its Relations to Modern Pedagogy*

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### II



GENETIC, as used in this connection, has reference to the natural mode of production and development. Genetic psychology, therefore, is that natural mode of developing its facts and principles—the inception, growth and maturity of thought, feeling and will—by the study of one's self, or by introspection and experimentation.

The record of this species of inspection, etc., generalized and made common for the race, would constitute a history of thought, etc.; and the grand result of such study, properly conducted, *i. e.*, making individual experience the basis of the facts of the science drawn from one's own mind, would be the formation of character not otherwise possible. This gives it a tremendous reach. It makes it the study of all studies, the science of all sciences, and the very acme of all true education.

The following are some of the definitions evolved by this species of study, following somewhat in the order of thinking:—

#### DEFINITION III

PERCEPTION, as a general faculty of the mind, is that power it has to acquire knowledge of things and their relations or conditions as phenomena. Hence it has a twofold office and character as

#### DEFINITION IV

SENSE-PERCEPTION, which is the power or susceptibility the mind has by which it gains a knowledge of matter, or the external world, as to properties, by means of sensations from impressions of environment made through the senses. Hence it is purely objective both in origin and effect. (See first statement in "Origin of Thoughts," first article, page 329.)

*a.* We see, hear, feel, taste and smell; but sense-perception does not reveal what we see, hear, etc., or how or why. It simply gives notice to the soul, through the senses, that the objects causing sensations by means of their external properties exist, and are present as necessary to the sensations experienced, and the consequent phenomena of sense-perception. It takes cognizance of only what the senses reveal. Hence the name, sense-perception, leaving the thought percept in an unfinished state, or hands it over, as it were, to other co-ordinate powers.

*b.* To illustrate: I taste sugar or vinegar, smell a rose or an onion, touch silk or sand, hear a musical note or the filing of a saw, see an object of certain limitations as to the color line and other properties as size, form, etc., or I experience a sense of heat or cold, of vigor or languor. In all these I experience the simple sensations caused by the presence of these objects or states,—all of which are reported in consciousness,—and I outwardly perceive them as phenomena—nothing more.

*c.* It matters not that these sensations have received different names, as sweet, sour, beautiful, or deformed, etc. The simple fact is the sensations are produced, and the consequent sense-perceptions are formed as result or content. This is all that remains until further processes ensue; for when the mind perceives more fully as to differences and similarities,—the first step in conscious thought,—and takes cognizance of causal relations, it is quite another thing. It is an after step, a recognition of former impressions, or of sense-percepts arising out of them. Hence, to complete the process of percipience, the mind goes a step further; and we call this after step

#### DEFINITION V

APPERCEPTION, or subjective perception, which is the power the mind has to discover simple differences and similarities, to note resemblances and contrasts, to perceive abstract truths and their relations; or the power the soul has to transmute mere sense-percepts into percepts proper. (See second part of state-

ment "Origin of Thoughts," first article, page 329.) This process is sometimes called *percipience*, and is purely subjective as to origin and result, and is nearly allied to conception which follows.

*a.* Apperception may be further described as the process of bringing a residuum of sense-percepts that linger below the plane of consciousness above it, and establishing the identity of these percepts when formed, rendering that which is vague and obscure plain and palpable in consciousness.

*b.* Dr. Harris says: "It implies the mind's reaction against impressions of the senses. It recognizes and explains to itself what it sees, hears, tastes, and smells, etc." (See Educational Review, June number, 1895.) This corresponds with definition above.

*c.* Apperception, therefore, seems to occupy an intermediate relation in thought between sense-perception on the one hand, and conception on the other. It is the consequent of the former, and antecedent of the latter. It brings percepts into the realm of conception and consciousness, whereby generic properties and processes are disclosed and identified, whence, also, concepts and generic properties are apprehended.

*d.* The whole mind is thus a complex harmony of genetic energies, each movement necessary to the complete action of the whole. It is a unit of scientific symphony that palpitates in the human soul.

#### DEFINITION VI

CONCEPTION is that power or ability the mind has which enables it to evolve elementary thoughts from antecedent percepts, both from environment and from apperceptive action of the mind itself, whereby inherent differences and similarities are distinguished, and generic classifications formed based upon these characteristics. (See statement "Origin of Thoughts.")

*a.* Hence a concept is an elementary thought embodying the elements or generic properties of things material and

immaterial. The process is sometimes called concipience, and implies not only the germination of thought in the mind after its fertilization—so to speak—by perception, but also the gathering together of inherent properties, and so adjusting them that they may be distinguished one from another. This part of the office of conception, which naturally follows the evolution of thought, “is the gathering together of individual characteristics under a common name on the ground of common attributes.”<sup>1</sup>

b. Conception differs from apperception, not only as in the foregoing, but, as the prefix “con” implies, in that it advances another step toward complete thinking—*con-* or *col-*lecting together elements of concepts. It takes these elements thus furnished by apperception and moulds them, as it were, into concept, ideas, and complete thoughts, not mental pictures, as some have said, since these are but the acquired products of memory, but the completed *original* thought, ready for expression in language; and this is the first step in conscious thinking as we shall see as we proceed.

c. It may be added here, and explained further on, that all concepts appear in consciousness where appear our general notions of things material and immaterial, and thus constitute or become the basis of correct thought and expression; *i. e.*, clear concepts become clear thoughts when expressed in language. And it may be further stated that it is at this point of the child’s progress that language lessons should begin with the young, for it must not be inferred that any of the other powers of the mind have thus far been inactive. On the contrary, the activities thus far described have been accompanied more or less vigorously by all the others. It requires the whole mind to think. In this regard it resembles a delicate harp in which the vibrations of each and every string are inter-communicative throughout, more or less powerfully, while each one contributes to the beauty and harmony of the

<sup>1</sup> Most authors, if not all, make this the only office of conception. It is evidently only one part of it.



whole. Healthy thinking, therefore, is the harmonious employment of all the powers of the mind upon any given subject. (See definition in first article, page 329.)

But *How may we know or realize thought or thinking?* The answer may be gathered, perhaps, from the following:—

#### DEFINITION VII

CONSCIOUSNESS is that power the mind has to apprehend and know its own acts, operations and states and to know them as belonging to the ego, self or soul. “Since if I know a thing, I know that I know it; for if I do not know that I know it, I do not know it;” *i. e.*, it has not appeared in consciousness. The same may be said of feeling and willing, since all mental acts and states appear in consciousness.

*a.* All sensations, perceptions, conceptions, thoughts, volitions, and all knowledge are reported in, through and by consciousness. That which does not appear in or above the plane of consciousness, so to speak, is to the individual mind as though it were not, or never had been. It has no existence in the ego; *i. e.*, impressions made upon and through the nerves, under normal conditions, and centering in the sensorium, ordinarily awaken mind to thought, of which the soul is conscious. But if these nerves are severed, paralyzed, or otherwise rendered inoperative, so that the impression does not reach the nerve center, there is no report from this central office, hence no sensation or perception in consciousness. Hence consciousness does not originate thought or feeling or volition. It only records and reflects what is in the mind at the *present* time.

*b.* Hence again, we cannot be conscious of what took place yesterday, or *any past time*. We can remember it, and we can be conscious of remembering it. We cannot be conscious of the presence or absence of our friends. We can be conscious only of knowing or suspecting or imagining their presence, etc. We hear people say sometimes, “I am or I am not conscious of that fact of the past.” “I am or I am not conscious I was angry, etc.” We may only say, “I do or do not know or realize now that such

and such was the case"; and we may be conscious of *knowing* or *not knowing* or realizing these facts.

c. Again: if, for any cause, the attention of the mind is so diverted and drawn after other things as to overcome or prevent the required impressing force from properly affecting the sensorium, then there may be little or no trace of consciousness remaining. Careless reading, careless hearing, or general indifference to what is before the mind may produce this state of things; and the question is often asked, "Did the person really hear or see?" even though the organs of sense may have been in healthy condition and properly addressed. The answer to such inquiry may be in the negative, since the conditions of hearing, etc., have not been complied with. "He that hath ears to hear let him hear," is a wise injunction.

d. It sometimes happens also, in case of these weaker impressions and indistinct sensations, or from inattention at the time, there may yet be faint traces of consciousness lingering after the cause of them ceases; in which case the memory may struggle to recall and represent the sensations in consciousness, and may so far succeed as to render them tolerably certain. The striking of a clock is an instance where the number of strokes may be recalled long after they have ceased to sound.

c. It might be well here to compare the four or five different operations of the mind to see how closely they are allied to each other while thinking, feeling, etc.

1. SENSATION is the mere effect produced upon the mind at the seat of sensation or the sensorium by something external to itself acting through the nervous system, and thus serving to set it in motion, which motion gives sensation.

2. PERCEPTION, from *per* (here meaning *through* or *by*), and *capere*, to take or seize: hence, to take through or by means of; as the mind in *taking*, acquiring by means of. (See *sense-perception* and *apperception*.)

3. CONCEPTION, from *con* (meaning together or with), and *capere*, to take or seize: hence, to take together, with, as when the mind seizes upon fact or truth through recognition of ge-

neric differences and similarities of things, and generalizes therefrom, a prime necessity in thinking, since all thinking consists in a consciousness of differences supplemented by a consciousness of similarities in the midst of differences. All thinking is done on this plane, between these two poles of thought or extremes.

4. CONSCIOUSNESS, from *con* (as per, above) and *scire*, to know: hence to know together within one's self or soul. To know the present operations of one's own mind, etc. (See definition.)

There is yet another source of original knowledge, an inner perception—not apperception, but that which reveals only *necessary* truth or falsity, and is confined exclusively to this class of truths. It is called

#### DEFINITION VIII

INTUITION, which is the power the mind has to immediately apprehend necessary truth; or it is the immediate apprehension of necessary truth—apprehending truth without reasoning for it,—its reasonableness being self-evident; as every effect must have had a cause, every material object must occupy some portion of space, etc.

*a.* It is the spiritual sense opening inwardly as sense-perception opens outwardly. Hence its satisfying certainty of apprehension. There are at least two varieties of intuition, their difference indicated somewhat by the manner of apprehending and knowing a thing or truth, viz.:—

1. RATIONAL INTUITION, or the immediate apprehension of necessary truth *without* the intervention of any contingent phenomena, as in the above, “cause and effect,” the necessary conditions of space and matter, time and events, personal identity, etc.; and

2. EMPIRICAL INTUITION, or the immediate apprehension of necessary truth, while the mind *is* conscious of some contingent phenomena, as in the case of all mathematical axioms; as the whole of a thing is greater than a part of it: equals added to or subtracted from equals, multiplied or divided by equals;

equals raised to the same powers, or the same roots extracted from equals; or things equaling the same thing will all be respectively equal, and otherwise, unequal. In all these latter cases the mind is conscious of experimental knowledge to a limited extent, at least. Hence the name "empirical."

#### MEMORY A REPRESENTATIVE FACULTY

##### DEFINITION IX

MEMORY is that power and activity of the mind that enables it to retain, recognize, and reproduce past impressions, sensations, percepts, concepts, and thoughts concerning former things, transactions, events, dates, names, places, etc., whereby thinking—connecting concepts, thoughts, etc., in a logical way—is made possible and profitable as mental processes.

##### REMARKS AND EXPLANATIONS

1. Without the exercise of memory, as indicated in the above, both thinking and the expression of thought would be impossible, since nothing but present impressions, sensations, and other mental phenomena could be realized in consciousness. Language itself would be impossible, since thoughts would fade from the mind while forming, or before verbal expression could be given them. Its great importance in mental operations may hence be inferred.

2. Recollection and memory, its generic antecedent, are often confounded one with the other. Remembering is retaining in mind impressions, sensations, concepts, etc., ready for immediate use; while recollecting is simply collecting them again in a logical way—after they have become somewhat dimmed or dispersed, scattered or lost—and made ready for use. Recollection is therefore a part of memory, and their offices are similar, but not identical.

3. Memory may have different forms or offices, corresponding to its mode of action and the things remembered, as:—

*a. Local memory*, the memory of places, also form of objects and faces.

*b. Verbal memory*, as the memory of words, names, dates, etc.

*c. Philosophical memory*, as remembering by noting cause and effect, similarity and contrast, contiguity of time and place, parts and wholes, symbols and signs, etc.—any one of which being present or remembered suggests or uncovers, as it were, the thing to be remembered.

4. Memory is also largely subject to the will, though there are thoughts, images, etc., that seem always present in mind and ready for use, even things we do not often forget, such as our own identity and names, faces of our friends, and other familiar objects and places. These are acts of involuntary remembering, or seem to be such, while others clearly present themselves at the call of the will, and may be the products of voluntary remembering, and border closely upon recollection.

5. Various devices have been employed for improving the memory, but most of them are of doubtful utility, and some are positively injurious. It may be safely stated, I think, that any method that calls it into legitimate activity improves it, while that which merely stimulates it for present effort, or that which overburdens it, injures it. It has, like other powers of mind or body, its own laws of activity and growth, which may not, without danger, be disobeyed.

6. It might be useful, however, to study some of those laws and methods whereby it may be improved.

- a.* Attention and interest aid the memory in retaining.
- b.* Deep and strong impressions cause durability in memory.
- c.* Frequent repetition of impression or of expression improves it.
- d.* Association of things, acts, or events enables one to retain and recall more readily.
- e.* The use of signs and symbols, or of written words, aids memory.
- f.* Noting cause and effect, similarity and contrast, aids memory.
- g.* Habitual and systematic use in doing things will improve and preserve memory.
- h.* Trusting it will improve it, as it does other friends.

*Question.*—When and under what circumstance does memory fail?

*Question.*—Can such failure be prevented? etc.

NOTE.—The above laws of memory should be discussed thoroughly by the class. Individual experiences should be given by each member, when it will be found no two will be exactly alike. Let this be accounted for, also. The mere repetition of a definition or of a law will not suffice. The study of the mind requires closer thinking than ordinary subjects, *i. e.*, if we expect to make it profitable. The diverse careless and injudicious study of the mind as we find it treated in many text-books is a source of confusion to the ordinary student. What he should do is to study himself,—his mode of thought, his impulses, his will,—using his text-book only as reference or help. The habit of mere lesson getting and lesson “grinding,”—*i. e.*, memorizing the words of the lesson for the purpose of saying in recitation,—as practiced in some schools, is responsible for a large share of this inefficiency, to say nothing about the flippancy of some authors I know about.

#### DEFINITION X

IMAGINATION is that activity of the mind which enables it to change—exalt or degrade—original concepts, thoughts and other mental phenomena, and to construct new mental images and combinations from them, not as they are in reality, but as they might be. It deals only with concepts already formed, adapting them to their new conditions and uses. Hence, like memory, it belongs to the representative faculties of mind.

#### REMARKS AND ILLUSTRATIONS

We may have several forms of imagination, determined largely by the objects and their concepts with which it deals; as

1. THE POETIC IMAGINATION, which appeals mainly to æsthetics or taste, to the sense of the beautiful in color, form, sentiment and feeling; seldom to the grotesque and monstrous; and never to the impossible. Painting, sculpture, and music, and the fine arts are embraced in this category.

2. DESCRIPTIVE IMAGINATION, while excluding some of the foregoing, deals with objects, scenery, events, etc., in which exaggerations in size, form, color, depth, height, etc., may occur. The use of hyperbole is common in this form, especially in the description of events.

3. THE DRAMATIC IMAGINATION indulges in highly wrought images and characters representing both tragedy and comedy in human life. The novel and romance are milder forms of the drama. The first belong to the stage, and represent the more striking forms of this power.

4. THE CONSTRUCTIVE IMAGINATION leads to discoveries and inventions in art and industry. Geometry and its applications in mechanics are its special fields of operation.

5. Nearly all the mind's operations and acts are more or less tinted, as it were, with imagination, whereby facts and theories are altered to suit the occasion. But few narratives and historic events escape aberrations of this sort, mostly to suit the fancy of the narrator. Indeed, literature, and even science, would present but a barren field were it not for the polish lent them by the imagination; and rhetoric and the fine arts would be well nigh impossible.

SOME OF THE LAWS AND MEANS FOR IMPROVING THE  
IMAGINATION

*a.* The gift is usually strong but crude in children; hence, subject to unnatural growth. The greatest care should be exercised in the selection of stories free from frightful or monstrous details and absurdities, as "buga-boo stories" on the one hand, and silly inanity on the other. Truthfulness and vigor should characterize all literature for children; *i. e.*, true to nature.

*b.* No two persons have this natural gift in the same form and degree. Hence, treatment for improvement must vary to suit conditions. Natural inclinations should be sought.

*c.* Forms may also vary in different persons, requiring additional care in the selection of literature for individual cases. Great harm may be done by forcing it.

*d.* Stories and myth appeal to the dramatic form of imagination, but they should be natural and true to life.

*e.* Many stories used in the schools, aside from their silliness, are sometimes exceedingly improbable or unnatural, leading to false impressions and to the practice of falsehood itself.

*f.* Geography and history afford ample fields for the culture both of descriptive and romantic imagination.

*g.* Nature study, if properly presented, abounds in unflagging interest for the young. The imaginary and the *real* intercourse among plants and animals of the various species are both strange and new, and fill the young minds with the most exalted conceptions of the operations going on about them; such as what the plants say, the animals, day and night, summer and winter, light and darkness, the winds, the rains, the frosts and snow and hail, etc.

*h.* These, with original composition, spoken and written, the descriptions of real and imaginary objects, events, journeys and other acts, together with the practice of the various industries now becoming popular in most schools, afford a field of boundless extent for the cultivation of imagination.

#### DEFINITION XI

PHANTASY is an abnormal action, or state of mind in which strange, grotesque, fantastic, and absurd notions are formed without regard to law or order, or the possibility of realization in most cases.

#### REMARKS

1. Though by most authors phantasy is regarded as a legitimate power or faculty of mind, it is by no means a natural or a desirable one.

2. The phantasm, or product of phantasy, is the product of a disordered action of the mind, if not of a disordered mind itself. It is a species of mania in which all its images appear in an exaggerated or disordered form. Somnambulism, dreaming, reverie, hallucination, delirium, insanity, and madness, are all species of fantasies or phantasms, and surely these should be avoided.

3. While the mind under certain conditions is capable of these strange manifestations, it is clear they are all abnormal, and hence should not be indulged. And while all other powers of the mind may be properly cultivated by legitimate use, this one should be discouraged, or else directed into some useful channel, if possible.



## *Sensation in Plants*

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THE Greeks endowed many trees with a dual life. Every tree had its appropriate day, and a fair nymph whose life was bound up with its existence. With the tree she was born; with it she suffered and died. Its virtues and faults were hers. She was its feminine complement. None of their trees, even the most noble, appears to have been virile.

Everyone knows the beautiful myth of Rhœcus. It has been interpreted by Landor and by Lowell. The tale is as follows:—

A certain Rhœcus, walking one day in the forest, was grieved to see an old, decrepit oak. He commanded his servants to prop it against the winds, that its life might be spared. Its dryad was dying with the moribund tree, so when Rhœcus came to their mutual aid she became visible, thanked him earnestly, and promised to bestow upon him any gift he might ask. Of course she was beautiful and engaging, and he begged for her love. She complied, but with conditions. She promised to be his so long as he was faithful to her alone, certainly a reasonable condition. Whenever she needed help and he were absent, she was to forward to him a bee as her messenger.

Things went on well for awhile, but, as was ever the case in these ill-assorted unions, Rhœcus began to tire of the woods, and yearned for the city and its gayeties.

“It happened on a summer day,  
When Rhœcus was absorbed in play,  
Not much regarding anything,  
He felt the insect’s vengeful sting;  
And with a fierce and sudden cry  
He brushed aside the warning fly.  
Alas! he never more did see  
His gentle maiden of the tree,  
Who, angered at this thoughtless slight,  
Had ta’en away her lover’s sight.”

Is it because our remote ancestors were arboreal in habit, or because later on they undoubtedly roamed the woods as free-born savages, that we all feel "the call of the wild," a sense of restored liberty when we reach the woods and scent their odors? Did the Greeks embody a half-conscious reality in their pretty myth? Do we all recognize in part a certain sub-consciousness in trees? We find quite a number of modern botanists, and by no means those given to flights of fancy, expressing a belief that plants possess a certain knowledge, a conscious relation to their environment. It, they say, may not go so far as feeling, as they possess no nervous system, but it is a something responsive. With all organized creatures they rejoice in mere living, are happy when in good condition, and suffer when injured. Nor, in this consideration, do the learned confuse the thought by considering motion or the response to stimulus, as in Venus' fly-trap, or mimosa, as factors in the problem. These are mere mechanical manifestations. They do think, however, and it should make us all wary, that a tree expresses pain when mutilated, that it wearies with disease and succumbs to pestilence.

Knowledge and feeling—a dim sense of existence—are quite apart from thought and reason. No one claims for a plant these higher mental attributes; but to know that in any sense it responds to our affections is a comfort. We all have, as Lowell says,—

"Many a lifelong leafy friend,  
Never estranged."

It is a delight to know that our feeling may be reciprocated. The dryads then are restored after all these neglectful years. We, too, like the Greeks, associate our trees with nymphs and graces, Yankee or Indian.

Where does this consciousness, if there be such, abide? It is entirely incapable of demonstration. It belongs to the speculative side of science, and by many would be regarded as wild and visionary. A tree is not, like ourselves, individualized. It is a community where each member does its work partly for itself, partly for the commonweal. Even animals that possess ganglia of sensation, or even a central brain, are still composed,

as in a tree, of myriad cells. Each cell is a complex organization. Though bound up with the life of its fellows, it is a center and promoter of special activities. It has its own round of existence. It is responsive to light, heat, electricity, and mechanical disturbance. In this sense even these prophetic entities feel. We do not claim for them memory—a high animal endowment, a supreme gift to man and some higher animals.

Perhaps it is as well they are spared the pang of recalling their separations and multitudinous trials. On the other hand, if in their long life they could recollect, record, and transmit historic scenes, how many a graphic picture they could bestow! Take the great trees of California, the baobab of Africa, the dragon tree of Teneriffe, the chestnut of Mt. *Ætna*, the gum trees of Australia, the oaks of Sherwood Forest—what tales they could tell of the “old time before us”!

### *A Friend in Need*

How well we love the friend in need,  
Whose sympathy most kind,  
When trials come to overwhelm,  
We always seem to find.  
They ever have such loving words,  
And sweetest comfort bring  
When sorrow, from the aching hearts,  
Such misery would wring.  
  
They wipe away the tears of grief,  
And blessings bring their friends,  
As with the comfort of their love  
Such tenderness e'er blends.  
They never flee when sorrows come,  
But then will be most true,  
And prove how much their loving hearts  
Will try to do for you.  
  
Such are the friends mankind will need,  
And to them ever cling;  
For they are ones that to their souls  
Most happiness will bring.  
They will not tire and weary friends,  
As fickle hearts will do,  
Who quickly go when sorrow comes,  
And prove they are untrue.

MARTHA SHEPARD LIPPINCOTT.

Moorestown, N. J.

## *The Use of the Model in English Composition*

CATHARINE A. DOLE, LEBANON, N. H.

“NY imitation is bad art,” says Mr. Arlo Bates. This seems to be the opinion of most teachers of English. All acknowledge the helpful influence of good reading, but would not encourage conscious imitation. Imitation, they tell us, destroys originality. Pupils are much more likely to contract the faults of the style by imitation than they are to acquire its virtues. No text-book in rhetoric, so far as I know, published prior to 1902, no edition of any one of the works included in the college required reading, suggests passages for imitation.

In venturing to present the other side of this subject, I merely voice certain questionings arising from dissatisfaction with the results of my own experience. Careless, dilatory, boys and girls who call their English “a snap,” and come into class half the time with their lessons unprepared, will write far better papers than the most conscientious and painstaking workers if the home influence in reading and conversation in the case of the shirkers is good and in the case of the workers is bad. Unconscious imitation seems to outweigh all our teaching. Could not conscious imitation be made to counteract the influence of unconscious? These questionings present themselves for our consideration, with a greater possibility of value when reinforced by the well-known opinion of Stevenson. After relating how he has “played the sedulous ape to Hazlitt, to Lamb, to Hawthorne, to Montaigne, to Beaudelaire, and to Obermann,” how he wrote one essay three times, first in the manner of Hazlitt, second in the manner of Ruskin, and third in that of Sir Thomas Browne, he concludes with a paragraph which I take the liberty of quoting in full:—

“That, like it or not, is the way to learn to write; whether I have profited or not, that is the way. It was so Keats learned,

and there was never a finer temperament for literature than Keats'; it was so, if we could trace it out, that all men have learned; and that is why a revival of letters is always accompanied or heralded by a cast back to earlier and fresher models. Perhaps I hear some one cry out, 'But this is not the way to be original.' It is not, nor is there any way but to be born so. Nor yet, if you are born original, is there anything in this training that shall clip the wings of your originality. There can be none more original than Montaigne, neither could any be more unlike Cicero; yet no craftsman can fail to see how much the one must have tried in his time to imitate the other. Burns is the very type of a prime force in letters; he was of all men the most imitative. Shakespeare himself, the imperial, proceeds directly from a school. It is only from a school that we can expect to have good writers; it is almost invariably from a school that great writers, these lawless exceptions, issue. Nor is there anything here that should astonish the considerate. Before he can tell what cadences he truly prefers, the student should have tried all that are possible; before he can choose and preserve a fitting key of words, he should long have practiced the literary scales. And it is only after years of such gymnastics that he can sit down at last, legions of words swarming to his call, dozens of turns of phrase simultaneously bidding for his choice, and he himself knowing what he wants to do and, within the narrow limit of a man's ability, able to do it."

Stevenson, you will notice, calls such imitation "practicing the literary scales." Miss Jordan, head of the English department at Smith College, writes, "I never advise imitation except for the most technical practice; *i. e.*, five-finger exercises."

Now, if imitation—conscious imitation—be considered to perform the same office for the author that scales and five-finger exercises do for the pianist, then such imitation may be most useful to the high school. For, as the symphony and sonata are beyond the comprehension and knowledge of most high school boys and girls, so the literary value of anything they can be expected to produce must be a promise rather than a finished performance; and the lessons assigned will, in a considerable measure, be in the nature of five-finger exercises and scales.

All our achievement is a sort of compromise between the ideal and the practicable, between what we wish we could do and what, as a matter of fact, we are capable of doing. The people for whom "there is no such word as fail" are those who use rare good judgment in what they attempt. The teacher of English in the high school, therefore, will be wise if, at the outset, he acknowledge his own limitations, and try to realize the limitations of his pupils. High school girls and boys are still children. They are still in the age of receptivity; their minds are eagerly occupied with understanding and assimilating new ideas. Ask a class of high school pupils for their own ideas, their own opinions, and you shall find that, outside of very narrow range, they have none. They are ready to accept your opinions with approving nods, and to adopt them as their own. This attitude of mind is what makes them so teachable in all other subjects, but it is an almost insurmountable barrier to anything like authorship. You cannot teach the best way of saying it to the boy who has nothing to say.

As a consequence of the search for subjects that shall prove interesting, and shall result in papers having any sort of excuse for being, the English course has come to include a superficial study of almost every known subject. The boy writing his weekly theme is, for the time being, a student of architecture, literature, history, science, political economy, or what not; ransacking every library, public and private, at his disposal, and making wild demands upon his family for information which he fails to find in books. Such study, however beneficial in its way, is assuredly not the study of English composition, save as all study, all thought, may be considered a sort of composition. Composition is an art. The pupil is not to learn about something, he is to learn to do something; namely, to give his thought effective and fitting expression.

Now, how do we learn to do anything, from holding our first baby spoon to playing the piano? By practice and—am I not right?—by imitation. When you learned to sew, my professional sister, your mother took the work from you dozens of times, saying, "No, don't do it that way; see how mother does it." You had to struggle away for yourself, of course, and prick

your fingers and knot your thread; but, in so far as you had any other teacher than experience, you learned from seeing how the work was done by some one who knew how. In proportion to the strength of your desire to learn you imitated, painstakingly, slavishly.

Professor Baldwin of Princeton devotes an entire work on mental development to the attempt to prove that we owe all that we are to imitation, closing the book with the question: "What is the great World Copy, and how did it get itself set?" He says: "It (imitation) enables me, the child, to pass from my experience of what you are to an interpretation of what I am, and then from this fuller knowledge of what I am back to a fuller knowledge of what you are. Further, this process of taking in elements from the social world by imitation and giving them out again by reverse process of invention (for such the sequel proves invention to be—the modified way in which I put things together in reading the elements which I get from nature and other men back into nature and other men again), this process never stops. We never outgrow imitation nor our social obligation to it. Our sense of self is constantly growing richer and fuller as we understand others better, and our understanding of them is in turn enriched by the additions which our private experience makes to the lessons we learn from them."

If in social intercourse we learn to know each other and to know ourselves better by imitation, so also in writing. Let me illustrate by a few simple exercises founded on the college required reading. An exercise in imitating poetry may serve to increase the vocabulary. I do not mean to advocate any attempt to write English verse as university lads used to write Latin verses and Greek odes. But take a simple narrative stanza from *The Ancient Mariner*,—

"Merrily did we drop  
Below the kirk; below the hill;  
Below the lighthouse top."

There is nothing difficult about the metre; there is only one rhyme. If you wish your boys and girls to appreciate the art

behind the apparent simplicity, let them describe a similar experience in the same way. Ask them to relate some actual passing from place to place just as it really was.

“Eagerly did we rush” [says one],  
“Straight up the street, and up the hill  
Up to the ——”

and stops. Words that rhyme with “rush” are unfortunately out of place here.

A lively class exercise may be made of this. We will hunt up all the one-syllable words of motion, each pupil with dictionary in hand. Then we will decide which of these best expresses our manner of going while at the same time it rhymes with the knoll or bank or grove, or place that we are going to; or the trees, or spire, or crest, or sky that we are going above; or the various inferior or infernal places that we may be going below. Next will come a consideration of the three-syllable adverbs ending in *ly*, remembering that the description is in the first person, so that the adverb should accord with the sentiment of the writer. An onlooker would have said that the ship dropped gently, silently, gracefully, easily, perhaps by poetic license dancingly, down the bay; but the Ancient Mariner, thinking of the feeling of the crew, says “Merrily.”

I need not continue my illustrations. The emphasizing of the word “below” by repetition, the skillful management of the moving point of view,—such analysis of poems is familiar to us all. Many of our text-books call our attention to similar devices which serve various rhetorical purposes. Our pupils will read such notes; they will learn them if we require it; they will write a “criticism” of *The Ancient Mariner*, in which they will repeat and subscribe to the opinions of the editor as expressed in the footnote. But if, while they are reading the poem, a stanza or a few lines be selected and they be required to imitate it as exactly and as fully as possible, they will know some things about poetry that they could never learn by memorizing the opinions of others. They will have ever after a more adequate appreciation of rhyme and rhythm, of perfect diction, of general excellence. It is not necessary to imitate



many lines in order to obtain this result. After a struggle with that comparatively easy stanza, they will recognize the emphasis by repetition and the lyric note which expresses always personal experience in stanzas like,—

“Down dropped the wind,  
The sails dropped down.  
’Twas sad as sad could be!  
And we did speak only to break  
The silence of the sea.”

As a second result of this imitation they will, I believe, have acquired faith in the adequacy of the English language to express all shades of meaning, and in their own ability to find the right word. There are things to see and feel and think which pass the limit of a commonplace and meager vocabulary. Says the pupil: “We sailed out of the harbor. That’s all there was to it.”

“But Coleridge found more than that.”

“It was an awful place. I just can’t tell you how horrid it was.”

“But Coleridge could, and Dickens could, and Stevenson could; and so can you.” Some of our high school pupils need to find, by contrasting their work with the masters’, how far short they have fallen. Others need to attempt imitation in order to convince them that they can do anything at all. Suppose we are studying description, and I ask my class to describe a certain boy in such a way that a stranger entering the school-room could pick him out without other aid than the description. There will be some who, having given his weight and height, and the color of his hair, eyes, and necktie, will feel that they have done all that any reasonable teacher could expect. They will look at me with hopeless impotence if I suggest, “But give some idea of the expression of his face; of the character indicated by his countenance and bearing.” Very few have learned to see these things in faces. When, however, I have them open their Julius Cæsar to,—

“Yon Cassius has a lean and hungry look;  
Seldom he smiles, and smiles in such a sort  
As if he mocked himself and scorned his spirit  
That could be moved to smile at anything.”

When I show them this and say to them, "See if you can't change this over to fit George," then they have a definite problem before them and I get,—

"Our friend George has a frank and merry look;  
Often he smiles, and smiles in such a sort  
As if he loved to live, and scorned a spirit  
That cannot find some fun in everything."

This, changed into prose, gives me a better and more original description of George than I have been able to elicit in any other way.

I would not be understood to advocate parodies, which are caricatures, not copies. Nor do I like copies, if by a copy is meant a repetition in less effective style of the same idea. We are sometimes advised to use the material of the college required reading for reproduction. Good reproduction is even more difficult than good translation. The author meant what he said; and the teacher, though very sure that he never meant what the pupil has attempted to "tell in his own words," is often at a loss how to explain the author's meaning. May it not be safer to trust the author to explain himself to the patient student? We may try, for instance, to reproduce Shakespeare—we of high school immaturity. Did anybody ever reproduce Shakespeare? Did even Charles Lamb? But of course not. We may give outlines of plots, and write out our impressions of certain characters; this, I suppose, is what the suggestive reproduction is intended to be. If it were a question of paraphrase or imitation I would prefer the latter for the average high school pupil.

"How sweet the moonlight sleeps upon that bank!"

We are older, wiser than our pupils; let us reproduce that line; let us give it in our own words. I cannot. Can you? The line is the perfect expression of a beautiful experience. Anything we may say can at best but convey the impression made by the line, not by the experience.

Now suppose we say to our girls and boys, "Imitate that line. You cannot reproduce it. But put into the same form of sentence the impression made upon you by sunlight; think of the place where you love it best; of the emotion that it appeals to;

of what, by figure of speech, you might imagine it as doing. The moonlight seemed to Shakespeare so peaceful, so still, so beautiful, that he said, 'How sweet it sleeps.' Think, now, where the sun seems to you most delightful, and work until you can put your thought into appropriate words." We shall get some pretty enough lines like,—

"How soft the sunshine dances through the leaves!"

And if we have also,—

"How warm the sunshine lies upon my back,"

I would rather have that than some miserable nonsense about,—

"The moonlight reposes on the flowery slope like some fair sleeping maiden."

In prose also, especially in the construction of clear and coherent sentences, we need the model. The psychologists tell us that when we teach spelling we should not put incorrect forms upon the board for correction, but rather should require the pupil to write the correct form many times. Exactly the opposite method seems to prevail in teaching construction. Children hear careless and awkward sentences in oral recitations, in compositions read by their schoolmates, and (with regret be it acknowledged) in the conversation of their friends, and even of their teachers. The only counteracting influence is that which comes from correcting faulty sentences in their own exercises. This correcting, moreover, is far from easy. It would be easier to write it correctly at first than it is to rewrite an awkward sentence. I have sometimes given up in despair after vain attempts to help a pupil straighten out an involved and obscure tangle of clauses. Then there is the monotonous sentence structure with "and" and "but." It seems a pity that children should begin in the grades to form the habit, so hard to eradicate, of thus stringing their ideas together. They should be trained from the beginning to throw their thought into various sentence forms. Many of them leave the high school, some, I imagine, even leave the college, without learning to do this. When you tell a schoolboy that he has written an awkward sentence he tries patiently, but blindly, to rewrite it. If you have underlined his *ands and buts*, he cuts out about half of them by the simple

device of substituting periods for conjunctions. His attention should be called to sentences of the right sort, and his efforts directed toward the production of similar sentences. He needs practice in writing the correct form; and there are copies without number ready at hand from George Eliot, Addison or Macaulay, according to the style desired.

Said President Walker, writing of students who come to the Institute of Technology deficient in English: "The student should be advised very earnestly to make further progress in this direction" (*i. e.*, in the direction of better English work), "especially by reading books which have a peculiar ease and facility of expression, and in some considerable degree by reading such books aloud or by hearing them read by others. I am convinced that the education of the ear is too much neglected in the modern school." Instances which prove how parrot-like our pupils do imitate what they hear will be recalled by each of us. For example, my entering class last year were making an analysis of the story of Silas Marner in the form of suggestive chapter headings. One bright boy, having recently read a book where the chapters were begun by "In which," adopted this device for his Silas chapters, "In which we learn something of the Raveloe people and of Squire Cass and his family." At the next recitation "In whiches" came "thick as tale." The boy's eyes met mine with something of amusement, and next time he read his titles, "How Dunsey Cass went to sell his brother's horse and met with a misfortune." The class was about evenly divided after that between the "In which" and the "How" introductions. Another experiment my model made,—the attempt, namely, to condense the spirit of the chapter into a sententious aphorism: "Silas mourns the loss of his gold, but finds sympathy. Seeming loss is sometimes real gain." This found fewer followers, but suggests the idea of giving my Marner class this year the chapter headings of Goldsmith's *Vicar of Wakefield* as models for profitable imitation.

Perhaps such use of models as I have indicated is not really imitation. Certainly it is not what Stevenson means by "playing the sedulous ape." Shall we try to copy the style of prose

writers? Certainly, as before said, we do copy. It arouses interest in letter writing to correspond with the class; to pose by turns as the country aunt, the city uncle, the business-like employer, the elegant friend, giving and receiving invitations. The class seem to enjoy such letters, and they mimic them with appalling faithfulness. Here the teacher must face that other obstacle,—his own limitations. High school teachers as a rule cannot pretend to any mastery of literary style. If we could write as we wish we could write we should not be high school teachers long; the high school could not afford to keep us. The colleges may be able to give sufficient salary and sufficient leisure to include among their professors of English men who can follow their own instructions,—such men as Professor Barrett Wendell of Harvard, Professor Arlo Bates of the Institute of Technology, Professor Richardson of Dartmouth. The high schools cannot have such teachers. And how shall we teach others to do what we cannot do ourselves? This is where we need a model. It is as if that mother of the early sewing lessons should say: "You do plain sewing well now; it is time for you to learn to do finer and more ornamental work. I cannot do that as well as your aunt can. Sit near and watch her. Don't ask her any questions, for she is too busy to be bothered with you. I will watch you both, and help you to work as she does by any suggestions I may be able to make." It would be better, of course, if the aunt herself turned teacher, but this way of learning is to be preferred to forming a habit of working awkwardly.

But would it, after all, be better to rely entirely upon indirect influence, merely calling attention to characteristic excellence in each composition? Permit another analogy. Suppose a pupil almost, if not quite, ignorant of sculpture comes to a master in this art. Having been taken through galleries of statuary and instructed thus: "Notice the smooth grace and supple softness of this Fawn of Praxiteles, the complete relaxation of this Dying Gaul, the knowledge of the human frame which Michael Angelo shows. Look long at these statues, for you must ever after be dissatisfied with what is not true and so beautiful. Behold and admire, and you will forever long

for like excellence"—having been told these truths, would he be sent home to work with no model save what his own untrained eyes can see in the living form before him? Would he not rather, even after years of practice, surround himself with his favorite masterpieces of statuary, from which his glance might catch

"Hints of the proper craft;  
Tricks of the tools' true play"?

Certainly our analogies suggest imitation as one of the best means of acquiring skill in any art.

Imitation of literary style is, perhaps, not entirely analagous with imitation of the style of the sculptor or painter; yet further illustrations might be brought forward to show that such imitation is possible and, indeed, often unavoidable. There is one kind of imitation, however, that is impossible with the present text-books, *i. e.*, imitation of the general method of treatment. We can imitate parts, but we have no models of wholes. Our essays, if we except the De Coverley papers, are all too long; too exhaustive to admit of anything like similar treatment of subjects within the capacity of high school pupils. As a consequence the boys and girls copy each other; all graduation essays, with lamentably few exceptions, are alike. How I wish we had a volume of really bright and sparkling essays, works of master minds, not more than one to two thousand words long! With descriptions we are well supplied; but for narrative, with its difficulties of subordination of parts and of dialogue, we must look outside the required reading certainly. Where shall we find brief, pithy, argument, too superficial for a Webster or a Burke, but more able than anything our boys and girls can do? Whose essays shall we use to prove that an ordinary theme may be bright without being flippant; wise, yet not dull; stimulating and helpful, and still free from censoriousness or sentimentalism? With proper models it would seem that we might have kindred topics taken up in like manner; and then by saying, "Look on this picture, and then on that," make plain by contrast those faults of dullness, prosiness, and being generally not worth while, that we cannot explain, and hardly dare suggest for fear of producing complete discouragement.

Since the body of this paper was written I have received, through the courtesy of the publishers, two rhetorics, both of them very recent publications, which aim to teach the technique of English composition by the use of models. I welcome with pleasure this evidence of a more general belief in the value of the imitative method. With one of these books, however, I feel compelled to take issue in one respect. The book gives throughout, as models for imitation, extracts from Washington Irving; one is, therefore, brought to the conclusion that the end aimed at is that the pupil shall acquire Irving's style. This is not my understanding of the best use to be made of the model. The five-finger exercises and the scales are means, not ends. So all imitation is but a means to facilitate self-expression. I) would have my pupils clearly to understand this. When they themselves have something that they wish to say, I would on no account bring up a model, and thus turn attention from the thought to the mere outward form of the thought. But when, as often happens, the tired brain lags, and the pupil would have to write his subject to the dregs in order to grind out a thousand words, then I would say: "You have nothing now that you want to say; but the day will come when you will long mightily to say something, and to say it well. In order that you may be ready when that day comes, you must learn the secrets of the art. This that you imitate to-day is but a single detail, a choice of word or turn of phrase. The master's work is a combination of many such. Just as in the rendering of a difficult musical composition you might pick out a brilliant run, a difficult arpeggio, and practice scales and exercises to attain the mastery of a like technique, so by similar exercises in writing you may fit yourself for rendering unerringly those thoughts which some day you shall see spread out before you as the musician sees his score."

We know two kinds of musical failures: the player who has technique without feeling, and the player whose stiff and stumbling fingers refuse to do the bidding of the eager soul. We know among men and women two kinds of failures in the writing which it falls to the lot of each of us to do: there are those who have a fatal facility for saying an infinite deal of

nothing, too much expression, too little to express—the means made the end; again, there are those whose righteous indignation or sincere sympathy, lucid understanding or pure aspiration, fail to bless the world because the writer's very thought and feeling stiffen and shrivel at sight of pen and paper, too little technique—the subordinate suffered to cramp and dwarf the essential. Both these failures our teaching should strive to prevent.

Finally, no imitation of a single author can perform the highest service of which imitation may be capable. There is nothing so much to be desired as that our pupils shall catch the infection of art. Whatever we owe to imitation, there must be the added process of selection. We choose our models; and we are already well educated, morally or intellectually, when we have learned to choose wisely. Virtue is as contagious as vice. We wish to expose our pupils as thoroughly as possible to the right sort of contagion. If, by such exercises as I have suggested, we can but bring them into closer contact with the masters of our art, can train their admiration and arouse their emulation, we shall have gone far, very far, to assure their success.





*Editorial*

EVERY superintendent and every teacher knows that the atmosphere of the home has a large share in determining the attitude of the pupil at school. The home has the child in five or six determinative years before the school gets him at all. After he begins his schooling the influence of the home is predominant for seventeen or eighteen hours in the twenty-four hours of each day, to the school's six or seven. The natural respect and love of the child for his parents properly enthrone their standards and their judgment as his ultimate rule and law. Family feeling asserts itself, and what his brother or sister will say or think of anything profoundly affects a young child's views and actions. The homes where prompt obedience is exacted from the children by the parents; the homes where intelligence forms the daily environment; the homes where things material and moral are orderly; the homes where wholesome food, pure air and water, proper clothing, temperate habits, quietness, subordination of the trivial to the important are insisted upon; where study and work are put first, and play and amusement, while by no means despised or eliminated, are made secondary—such homes send to the schoolroom pupils who make teaching almost a pastime. The other kind of homes contribute the difficult problems of the teachers' experience. The difference is felt during the first hour of the first day of the first term by nearly every teacher. He knows almost instantly whether he has a hard job or an easy one before him; and the determining factor in nearly every case is to be found in the homes from which the pupils have come.

THESE facts are so apparent that the question of how to make the home help the school has long been to the fore, and is of perennial interest. We have had a particularly clear witness to this fact in the frequent calls that have come to us from different parts of the country for the four or five back numbers of EDUCATION containing articles which somewhat elaborately discuss this subject. Our supply of those particular numbers has been nearly exhausted. The need of some sort of instruction which shall reach out into the community and help the parents to right ideas and proper efforts, so that the home shall do its full duty by the children and send them to the schoolhouse suitably prepared for the duties and responsibilities which they will encounter there, is widely felt both by educators and the more intelligent parents. How can this instruction be secured?

THE problem is one upon which superintendents and teachers may properly think, write and speak. Its difficulties should not dishearten anyone, for much can be accomplished by persevering effort. There will always remain some homes where conditions will not be helpful. But they can be made the exception, not the rule. In all reforms the same discouraging factor is present in the larger or smaller contingent, as the case may be, of those who will not be reformed. We believe that almost any forceful superintendent or principal could bring about a great improvement in this respect in his district, and be of great help to the families from which he receives his pupils, by beginning a campaign with this end in view and keeping perseveringly at it. We suggest the following as among the resources at his command: (1) The teachers' meeting, at which the superintendent may organize his campaign and assign special lines of work to the "officers of his staff." (2) The local press, which will usually be found quite ready to lend its assistance in promulgating ideas suggested by the school officers and intended for the public good. (3) The mothers' clubs or other similar organizations, before which he may occasionally himself appear, or to the officers of which he may make such suggestions as will lead them to secure other speakers on topics relating to the home. (4) The School Association, already organized or which he may help to organize, and the special mission of which it is to develop popular intelligence in regard to educational questions. (5) The pupils themselves, who can be directly influenced and made to feel that the school is interested in them not only for the few hours during which they are at the schoolhouse, but equally at all times and in their entire environment. Thus school and home can be made mutually helpful, and the best results secured alike for teachers, pupils, parents and the State.

WE propose to devote a paragraph in this department of EDUCATION, in each of the next four or five numbers, to a statement of a few fundamental principles underlying true home life. In setting forth these principles we shall not expect to be exhaustive, but shall speak of such truths as experience and observation have led us to believe to be most important. If our paragraphs shall be suggestive to any teachers who are thinking and working along this line or to any parents who read EDUCATION we shall be gratified.

In naming LOVE as the first fundamental principle of true home life we are almost afraid of being charged with the unnecessary utterance

of a self-evident truth. Yet we are persuaded that more evils assail the home, interfering with normal, healthful development of character both in parents and children, from lack of real love than from any other cause. All too frequently the serious evils originating from this cause antedate the birth of a given child. He is not wanted and sometimes is even hated by the one who gives him life, and from whom he has the right to claim a loving welcome as his God-given birthright. We believe that the consequences to the child, of prenatal rebellion and hatred on the part of the mother, are as disastrous as they are reprehensible. These consequences are both physical and temperamental. Physicians tell us that the health of the child is seriously affected by the mother's mental condition before his birth. Who can doubt that his disposition is also influenced in the same way. If he is unwelcome we cannot wonder that when he has arrived he is fretful and cross. The child that is wanted; the one that from the first intimations of his existence is loved and rejoiced over with a holy joy; the one that is welcomed at birth to loving arms and a happy home, will repay this love in the same coin a hundred fold, and other things being equal will almost certainly be quiet, docile, obedient and easily managed. Half the problems of family government are solved by right and proper ante-natal conditions.

From birth onward through early childhood and youth, love plays a most important part in securing ideal results in the mutual relations of the home. The mother-love instinctively finds the right solution of the problems of infancy, and the child's physical and moral interests are carefully attended to. As he grows older the father-love and the mother-love create the atmosphere of the home in which the fairest virtues and graces flourish. This mutual love results in comradeship with the children. The boy who loves to be with his father and who gives his confidences to his mother unreservedly, is safe. The girl who finds her home with its duties and pleasures more permanently attractive than the ball-room or the theatre will grow up to be a good wife and mother. Love solves the problem of discipline, safeguards the life of youth, guides effort and ambition into right channels, develops all the higher, finer qualities of mind and heart, furnishes the most powerful motive for sustained and successful endeavor and makes almost secure a happy and useful life. But there are many homes where this atmosphere of love does not exist. We have sometimes been painfully amused by the frantic and ridiculous, though well-meant efforts of some suburban father to entertain

his children on a holiday. Throughout the year he has rushed off to the city right after breakfast and returned at about bedtime. He hardly knows his children by name; certainly he is poorly acquainted with their characters and dispositions. But on a given holiday he thinks it his duty to take them off on a picnic or other excursion. We pity him when we see what hard work he makes of it. And we pity the children in the homes where the love element is so neglected. These are the homes from which come the children who give the teacher her difficult problems. The children from such homes go out into the world, finally, wholly lacking in the beautiful qualities of filial devotion and a sense of family unity. It is the parents of such children who pass into a loveless old age and go to an unlamented burial. Love, from earliest infancy to the end of life, is the foundation of true home life. It does not always come and abide without earnest desire and intelligent effort. It involves unceasing devotion and self-sacrifice. But its rewards are beyond estimate, and eternal.

THE appointment of Mr. George H. Martin, of the Boston Board of School Supervisors, to the office of Secretary of the Massachusetts State Board of Education as successor to the late Hon. Frank A. Hill, will give general satisfaction. It is an eminently sane appointment. Mr. Martin is thoroughly acquainted with the problems of public school work. He is in touch with the schools of Massachusetts. He is a clear thinker, and has positive ideas and policies which are at once reasonably conservative and effectively progressive. The character of the man, his experience and providential training for his present opportunity, and the splendid support which he is sure of from the board and the public, are a guarantee that the high ideals for which Massachusetts schools are noted will be fully maintained. Her continued leadership in educational affairs under the administration of State Secretary George H. Martin is entirely secure to this old and goodly Commonwealth.

ON two or three occasions recently, President Eliot has advocated changes in educational management which have been in the line of the centralization of authority in one or a few experts, where at present it is lodged in a larger and more popular body. The attitude taken by him and a few others in relation to the affairs of the N. E. A. at Boston last summer is in point: On February 8th, at Sanders Theatre in Cambridge, he is reported to have advocated radical changes in the form of government of the Boston schools, the idea

being to elect a smaller board which shall work through executive heads having wide authority. This has led some of the Boston papers to comment rather severely on the present make-up of school boards in general. One paper says that citizens willing to give their time to this kind of service are reputed to be of three classes: First, "faddists with a crankism or a class or sect ax to grind, who spatter the whole department with the weak water from that grindstone." Secondly, "politicians, who try to make 'places' for their friends and their friends' friends." Thirdly, "citizens too weak to say No when asked to act, yet too busy or lazy to give the time and work necessary for introducing broad policies and for holding their cranky and spoilsman colleagues in check." It is proposed to get around these evils by abolishing the boards altogether or so limiting their power as to render them practically innocuous. With this heroic remedy the most distinguished and aristocratic of our great educators would set aside the time-honored customs of our fathers and lodge the power to make or unmake our educational destiny in the hands of the modern superintendent who is an expert, or in a small number of other men who have been elected because they are experts.

WHILE the weaknesses, abuses and evils incidental to the present system are sometimes glaring, we doubt the wisdom of the proposed remedy. It is certainly undemocratic and un-American. The characterization of the *personnel* of school boards above mentioned is unfair and untrue in that it leaves out of sight the presence of the many able, broad-minded, public-spirited men and women who often, and we believe usually, make up the majorities in such bodies. It is the presence of these fair-minded majorities that makes the strength of the present system. It is the essence of our Americanism,—this belief that in the long run the people will find the common-sense, practical, and on the whole wisest solution of all public questions more unerringly than any individual specialist or body of specialists. It is the old contention between democracy and aristocracy, the popular and the monarchical form of government. History seems to indicate that evils do not all disappear when power is concentrated in one man or a small body of men. If some advantages accrue there are corresponding disadvantages and dangers. We believe in expert advice and direction in school affairs. But we believe also in the modifying influence of the average sense and business level-headedness of the intelligent and patriotic men and women usually chosen to serve on our school boards. We think they serve as a wholesome check on "faddists" and extremists of various stripes; and we believe that it will be a long day before the people will vote to abolish them.

### *Foreign Notes*

#### THE SALARY QUESTION IN EUROPEAN COUNTRIES

The question of teachers' salaries looms large at the present moment in educational discussions the world over. In England it is the chief problem confronting the new local education authorities; in France the question of salaries for elementary teachers is second only to that of the religious associations, which it is claimed with some show of reason are the only bodies that have found the means of supplying good teachers at a trifling expense. In our own country the subject has been pressed home to thoughtful minds by Dr. Eliot's philippic of a year ago, and the subsequent action of the N. E. A. in appointing a committee to investigate and report the actual economic situation of teachers throughout the country.

In view of this widespread interest the time is opportune for considering the salaries which the teaching career offers to intelligent men and women in the principal countries. It should be premised that comparisons based on the figures given are of little value because of differences in the purchasing power of money in different countries and the varying standards of living to which teachers must conform.

The London school board, which has been charged with extravagance in the conduct of its schools, paid average salaries as follows in 1902: To head masters, £292 7s. (\$1,461); to head mistresses, £209 11s. (\$1,047); to assistant masters, £138 12s. (\$693); to assistant mistresses, £102 10s. (\$512). These salaries have been sufficient to keep up a supply of able teachers, from which it may be inferred that they compare favorably with inducements in other fields.

Considering England as a whole, in 1902 the average salary of a full-certificated master occupying the position of principal was £147 5s. (\$737.25); the average salary of a full-certificated woman principal was £97 1s. (\$485.50). Assistant teachers averaged much less.

According to a report recently published by the minister of public instruction in France, Prussia gives full recognition to the claims of experienced teachers. Probationers start in the service at a salary of \$348. The salaries of full teachers consist of three elements: (1) the fundamental salary; (2) the supplement for length of service; (3) residence or equivalent allowance. The minimum of the fundamental salary is \$225, but in the majority of cases the amount is greater, rising even to \$360. The supplement for length of service is allowed after the seventh year, and amounts to an increase of \$21 a year for each succeeding triennial period. Thus after thirty-four years of service the teacher will receive at least \$450 a year; but the supple-

ments themselves are often doubled, so that he will probably reach a higher sum. The allowance for residence is equal to one fifth the fundamental salary. The report shows that the mean salaries range from \$446 to \$580, as against a mean average of \$323 in France.

Attention has already been called in these columns to the very unsatisfactory financial condition of the primary school teachers of France. Not only are the salaries too low,—lower in fact than those paid in any other branch of the civil service,—but the strict limitation of the proportion of the whole number of teachers allowed for each of the five classes into which they are divided and the meager appropriation for pensions had effectually stopped promotions, so that the majority of the teachers, irrespective of the length of service, were kept down in the lower classes. This injustice has been partially remedied (1) by a special appropriation for increasing the number of pensions and also the proportion of the higher grade salaries; and (2) by doing away entirely with the “pourcentage,” that is, the limit of the number of teachers assigned to each grade. Meanwhile, the air is full of proposals for increasing the salary attached to each grade, and undoubtedly some measure of the kind will be passed as soon as the Chamber of Deputies can take up the matter. The salaries are paid by the State, but the communes may increase the amount, and must also provide a residence for the teacher. The increase is seldom forthcoming, except in the large cities.

The present range of salaries guaranteed by the State is as follows:—

|                        | Men   | Women |
|------------------------|-------|-------|
| Probationers . . . . . | \$180 | \$180 |
| Full teachers:—        |       |       |
| Fifth class . . . . .  | 200   | 200   |
| Fourth class . . . . . | 240   | 240   |
| Third class . . . . .  | 300   | 280   |
| Second class . . . . . | 360   | 300   |
| First class . . . . .  | 400   | 320   |

In the chief cities the range of salaries is higher. In 1900 the average salary in Paris found by dividing the total amount appropriated for salaries and indemnities for residence by the total teaching force was \$510. This estimate does not include money allowed for certain extra or special services, which increased the total income of many teachers. The school directors of the highest class, who do little teaching, but are responsible for the work of an entire school or school group, numbered 108. Of these eighty-seven received each \$880 a year, and the remaining twenty-one a little more, namely, \$900 each. These amounts include the allowance for residence.

The statistics published annually by the commissioner of education enable us to compare the salaries of the countries above considered with those that teachers receive in the states and cities of our own country; but for reasons already stated such comparisons signify little; indeed, they are generally misleading.

In this country it would be impossible to imagine a teacher continuing in the service under conditions of such hopeless misery as are described in the pathetic story of Jean Coste, the village schoolmaster whom all France has recognized as a national type. Fortunately, also, France responds naturally to an appeal cast in literary form, and Jean Coste has become the symbol of a "national peril" which the government will no longer tolerate.

#### MISCELLANEOUS NOTES

The Franco-Scottish Association, which was founded in 1896 at the inauguration of the new Sorbonne, celebrated its third biennial anniversary in September at Grenoble. From the recently published accounts of this gathering it is evident that the association is not only a means of strengthening the bonds between university men, but of promoting good will between the subjects who owe allegiance to Edward VII and the citizens of the French Republic. The toast to the King of England was drunk amid great enthusiasm to the music of "God Save the King."

The disposition to break down the barriers that separate secondary and primary education in France is emphasized by the call of a united congress of delegates (professors and teachers) representing both departments. The proposition originated with the professors of secondary or classical colleges, and has been authorized by the government, whose sanction was essential. The congress will meet in April.

The London Journal of Education publishes a recent address by Dr. Sadler on the "Influence of Herbert Spencer's Educational Writings." Like every criticism from this source the paper is thoroughly appreciative, but at the same time judicial. Dr. Sadler notes that Spencer's work on education appeared in 1861, the very year that Mr. Robert Lowe issued his "Revised Code," by which the government grants to elementary schools were apportioned on the results of the examination of individual children. Mr. Spencer's teaching was fundamentally opposed to the cramming induced by the system of "payment upon results," and was the strongest influence making for its ultimate overthrow. "It was Mr. Spencer, also," he says, "who dealt the heaviest blow at false ideals in the education of girls" and who "roused multitudes of his fellow-countrymen from their 'strange disregard of physical education.'" Spencer's exaggerated estimate of the claims of natural science was due, in Dr. Sadler's opinion, to an intense dislike of the pedantic method of language teaching. What he desired was "to stimulate individuality, the spirit of inquiry, and freedom of ideas." While recognizing what is truly valuable in Spencer's educational doctrines, Dr. Sadler is fully alive also to the evils that are directly traceable to his influence. He never understood nor rightly interpreted the forces that make for spiritual life in men or nations. In this respect "he differed from what is strongest and most fruitful in the great humanistic tradition." The review is in Dr. Sadler's happiest manner, and well deserves the careful attention of all educators and students of education.

A. T. S.



## Book Notices

**NOTE.**—The number of books now published monthly is so large that we shall hereafter adopt the plan of promptly acknowledging by title, author, publisher and price, all books sent us for review; and later, as space is available, give more extended notice to such as seem most likely to be of interest and value to our readers.—PUBLISHERS EDUCATION.

**Outlines of Greek History.** By William C. Morey. Dr. Morey is professor of history in the University of Rochester, has written several books on Roman history and law, and is a cultured and accomplished scholar. He has made in his story of Greek life a working text-book that has many excellencies and many novel features. Beginning as the writer of Greek history should, with a survey of ancient nations, he leads the student through a perfect avenue of approach from earliest times direct to the beginnings of Greece. The first four chapters, brief and succinct, are models of deliberate study and information. They treat of the beginnings of history; the far Eastern countries—China and India; the Mesopotamian countries—Babylonia and Assyria; and the hither Orient—Egypt, Phœnicia, and Judea. With this preliminary sketch of the progress of civilization before the time of the Greeks among the ancient Oriental peoples, well studied by the pupil, he is ready to attack the more special study of the history of Greece. Dr. Morey's idea developed in every chapter of his book is that the historical significance of any people must be estimated by what it has contributed to the general civilization of the world. The historical importance of the ancient Greeks rests upon their contributions to the growth of political liberty and to the development of a superior intellectual and æsthetic culture. Dr. Morey has endeavored to select and describe those facts which illustrate the most important and distinguishing traits of the Grecian character, the political history, to show the extent to which Greeks were successful in the development of free institutions, the history of culture, to show the great advance made by the Greeks upon the previous culture of the Orient. The successive stages are traced through the several periods of Greek history; and thus the student comes to the very heart of the life of the Greeks. The topical method has been employed as being the most scientific in its results, and the best adapted to the student needs and abilities. Every aid that will materially assist the student is indicated; there are selections for reading, with references to specific chapters in books; there is a vast number of cuts that serve to illuminate the text; and a striking feature is the progressive maps, ten in number, which show the geographical progress of Greece and the Orient. An evidence of good judgment and of appreciation of the return to better ways is found in the use of the familiar Latinized forms of Greek names in place of the rather bungling spelling which came about in an attempt to recast these names into a form more consistent with the original Greek. It may be summed up in a word, that Dr. Morey's history is a notable text-book on Greek history; that it is eminently readable, fair-minded, trustworthy, scientific; that it will stimulate the student to deeper reading and wider investigation. American Book Company.

**Samuel Chapman Armstrong.** By Edith Armstrong Talbot. This very interesting biographical study, by the gifted daughter of a distinguished father, has peculiar significance to teachers, in that General Armstrong was one of the founders of the great modern movement for manual training. His birth and early life in the Hawaiian Islands brought him into close relations with an inferior race, and gave him just the point of view and the practical training needed for his great mission to the American negroes. That Hawaiian life itself was a charming and romantic story, unlike anything else in the world, and calculated to make a lasting impression on a youth with a fresh, wholesome, poetic nature. Young Armstrong's college life at Williams, his thrilling experiences in the army during the Civil War, his wonderfully fruitful work as an organizer and educator, leading up to the founding of Hampton Institute, and the giving to the world that great personality, Booker Washington, are all told modestly, sympathetically, interestingly. This book makes a worthy companion volume to those two others by the same publishers,—“Up From Slavery” and “Character Building,” by Mr. Washington. There are sixteen illustrations. Doubleday, Page & Co. Price, \$1.50 net.

**Earth's Enigmas.** By Charles G. D. Roberts. Mr. Roberts is one of the most readable of the modern nature writers. Probably people of different temperaments will have different minds in regard to the faithfulness of his portrayals. His is distinctly a poetic temperament. His stories lie in the borderland between the real and the unreal—the fascinating, alluring region between human life and brute life; who shall draw the line of demarcation? Scientists are still hunting for the connecting link. The region of mystery between the two animals, man and brute, is a legitimate field for imagination and fancy. Mr. Roberts knows nature at first hand, having been brought up in the Canadian wilderness. He loves nature with a poet's fondness. He can see more of reality and dream more beautiful fancies than most of us; but we like to listen to his narration of what he sees and dreams, just as we love to hear the music of a great composer, even if we cannot fully understand it. “Earth's Enigmas” deals, as the author himself tells us, “with one or another of those problems of life or nature to which, as it appears to many of us, there is no adequate solution within sight.” There are a few well drawn and helpful full-page illustrations scattered through the volume, the work of Charles Livingstone Bull. L. C. Page & Co.

**Plane and Solid Geometry.** By Alan Sanders. This is prepared for the use of classes in high schools and preparatory schools. It is marked by certain well-defined features: the omission of parts of demonstrations; the introduction, after each proposition, of exercises bearing directly upon the principle of the proposition; all constructions are given before they are required to be used in demonstrations; exercises in modern geometry; propositions and converses, and the number of exercises. By the omission of parts of the demonstration the pupil is forced to rely more on his own reasoning powers, and is prevented from acquiring the detrimental habit of memorizing the text. In no case, however, is the student required to originate the plan of proof. The arrangement of the propositions and the style of the book render it an attractive one to students; its mastery will set them well along in their mathematical studies and on a well-grounded basis. American Book Company.

**Our Government.** By J. A. James and A. H. Sanford. The authors have been teachers of civil government for years, and they have embodied in the book the methods and subject-matter employed in their own schools. The subject is treated in the natural order, local, state, and national, and with the proper amount of fullness to each division. With a devotion to a style suited to the comprehension of the students who will use the book, the authors have suffered their temptation for fine writing to pass on, and they have made a book that will appeal at once to every teacher of civics and to every student of the subject. They set forth the facts of the government of the people in a manner that is at once attractive and inviting, and they give just the incidental facts to illuminate the subject that will inflame the desire of the student to further reading and deeper study. A fine harmony and due proportion of subjects characterize the work; nothing of importance is subordinated, nothing of importance is expanded to gratify the impulse for speculation and evidence erudition. It is a working text-book for boys and girls in civics, the kind that will make them wiser men and women, better able to appreciate the spirit of our government and its institutions, the kind that will make them better citizens. We give the work our cordial greeting, assured that the schools will be all the richer for their use of the book. Charles Scribner's Sons.

**Education as Adjustment: Educational Theory Viewed in the Light of Contemporary Thought.** By M. V. O'Shea. In a pleasant style Professor O'Shea discusses fundamental problems of education in the light of modern scientific thought. The reader will find in his book a useful review of the theories of the great educators from Plato to the present time. It is made very plain that modern psychology and the light that has come through other sciences give us a more satisfactory conception of the aim of education than mankind has ever before had. It will be a satisfaction to all workers in this great field to find such a full and encouraging summary of the results of modern education. In the way of practical suggestiveness and inspiration teachers will find the book most helpful. It is one of the best of the very excellent books composing the American Teachers Series. Edited by James E. Russell, Ph.D., Dean of Teachers College, Columbia University. Published by Longmans, Green & Co. Price, \$1.50.

**The Care of Destitute, Neglected and Delinquent Children.** By Homer Folks. Mr. Folks was until recently the Commissioner of Public Charities in the City of New York, and by his previous training and duties qualified beyond most men to write on the subject which he makes the burden of his book. His purpose in his work is to bring to bear on the practical problems of American social workers a concise knowledge of the historical evolution through which the charities of the country have passed, and to a consideration of the care of children who have been removed from their earlier environment and from parental control, and the direction of whose lives and the burden of whose support has been directly assumed or provided for by public authorities or private charities. The study is made exhaustive and thorough; each state is considered with respect to its law in caring for children and the various methods employed in public and private charities. Everyone interested in the care of neglected children will find this a most serviceable and valuable work. It is a perfect thesaurus of facts for all charity workers. The Macmillan Company.

**Lessons in Astronomy.** By Charles A. Young. The lapse of time and the necessity of making changes in the subject-matter has led Dr. Young to make a thorough revision of his popular text-book on astronomy. This required the making of an entirely new set of plates, giving the author the opportunity for excising extraneous matter, and inserting much that was new in discovery and theory. Many of the old illustrations have been replaced by new ones, and several beautiful plates of astronomical objects and instruments have been inserted. The star maps of the old edition have been replaced by maps which are far more satisfactory. In its new form it is easily the best book on astronomy for schools. Ginn & Co.

**Lessons in Physics.** By Lothrop D. Higgins. Where in schools little or no laboratory work can be had, Professor Higgins' book will be very useful. He sets forth the facts of physics in simple and clear language, and in a manner to be attractive to the student. It takes the student immediately into intimate relation with the facts and phenomena of his daily experience; it makes him think about things that meet him everywhere. The personal magnetism of the teacher has entered into every chapter of the book, a magnetism that is highly infectious and sustaining. We shall much misunderstand the minds of children if they do not find this to be just the book in physics they will most enjoy. Ginn & Co.

**A Practical Course in Spanish.** By H. M. Monsanto and Louis A. Langueuier. This well-known work has been long before the public, and has earned a revision which has been made by Freeman M. Josselyn, Jr., of Boston University. Dr. Josselyn has in his revision endeavored to preserve the original form of the work, recasting only such grammatical statements as seemed to demand it. The Spanish text is now in strict accordance with the latest rules for orthography and accent, being in entire harmony with the revision of Spanish accentuation made by the Academy in 1888. Teachers of Spanish will find this book to be thoroughly up to date and a practical working text-book in Spanish. American Book Company.

**Daniel Webster for Young Americans.** With an introduction and notes by Charles F. Richardson, and an Essay on Webster as a Master of English Style by Edwin P. Whipple. This book contains the most famous speeches of the great American orator. They have been selected and arranged with reference to the needs of the young people of the United States. The volume makes accessible for school and college use the best of the splendid efforts of Daniel Webster in behalf of the early constitutional progress of our country. Among the important speeches included in the book are, "The First Settlement of New England;" "The Bunker Hill Monument;" "Discourse on Adams and Jefferson;" "The Reply to Hayne;" "The Murder of Captain Joseph White;" "The Constitution not a Compact Between Sovereign States;" "The Character of Washington;" "The Presidential Protest;" "The Constitution and the Union;" "The Addition to the Capitol;" and "The Landing at Plymouth." The Declaration of Independence, The Constitution of the United States, and Washington's Farewell Address are also included. There are numerous illustrations which make vivid the stirring scenes among which the lot of the great orator was cast. Little, Brown & Co., Boston, Mass., Publishers, always make first-class books.

**Descriptive Chemistry.** By Lyman C. Newell. This is a large work of six hundred pages, and is primarily intended for teachers who wish to emphasize the facts, laws, theories, and applications of chemistry. While following the well-defined paths, the author has nevertheless some carefully worked-out opinions of his own, and these he has used with the best results. His noteworthy points are the application of chemistry to well-known industries, such as the manufacture of illuminating gas, acids, soap, steel, paper, sugar, etc., and the newer processes involving electricity, such as the manufacture of aluminum, calcium carbide, caustic soda, graphite, etc. Dr. Newell's work is a worthy contribution to the study of chemistry, and will have abundant use in laboratories and among standard text-books. D. C. Heath & Co.

We have received the following books for review in EDUCATION:—

*American Book Company:* Les Trois Mousquetaires par Alexandre Dumas. With introduction, notes and vocabulary by C. Fontaine. Mademoiselle de La Seigliere. Comedie par Jules Sandeau. With introduction, notes and vocabulary by Elizabeth M. White. Der Trompeter Von Sakkingen. With introduction, notes and vocabulary by Valentin Buehner. Cicero De Senectute. Edited by Frank Gardner Moore, Ph.D. Outlines of Greek History. With a survey of Ancient Oriental Nations. By William C. Morey, Ph.D. Beginner's French. By Victor E. Francois, A.M. The Gateway Series: General Editor Henry Van Dyke. Macaulay's Essay on Milton. Edited by Edward Leeds Gulick, A.M. The Merchant of Venice. Edited by Felix E. Schelling, Ph.D., Litt.D. Shakespeare's As You Like It. Edited with notes by William J. Rolfe, Litt.D. Poets of the South. By F. V. N. Painter, A.M., D.D. Patir A Tiempo por Don Mariano José De Larra. With notes and a vocabulary by Edwin B. Nichols. Undine. By Fouque. With introductory notes and vocabulary by J. Henry Senger, Ph.D. Molière's Le Bourgeois Gentilhomme. With introduction, notes and vocabulary by P. A. Roi and William B. Guitteau.

*The Macmillan Company:* Elements of English Composition. By Tuley Francis Huntington, A.M. Demosthenes on the Crown. Edited by William Watson Goodwin, LL.D. Price, \$1.10. First French Book according to The "New" Method. By D. Mackay, M.A., and F. J. Curtis, Ph.D., B.A. The Heart of Nature Series: First Book, Stories of Earth and Sky; Second Book, Stories of Plants and Animals; Third Book, Stories of Birds and Beasts. By Mabel Osgood Wright. New Physical Geography. By Ralph S. Tarr, B.S. Price, \$1. Modern English Prose. Selected and edited by George Rice Carpenter and William Tenney Brewster. Price, \$1.10. A Synoptic Text-book of Zoology. By Arthur Wisswald Weyssé, A.M., Ph.D. Price, \$4. A Modern School. By Paul H. Hanus. Price, \$1.25 net. The Macmillan Series of Writing Books, 1, 2, 3 and 4. By Harry Houston.

*D. C. Heath & Co.:* Principles of Political Economy. By Charles Gide. Second American Edition by C. William A. Veditz, Ph.D., LL.B. Modern Language Series: Goethe's Das Märchen. Edited by Charles A. Eggert, Ph.D. Campe's Robinson der Jüngere. Edited by C. H. Ibershoff. Baumbach's Das Habichtsfräulein. With introduction, notes, vocabulary, and material for conversational exercises in German by Dr. Wilhelm Bernhardt.

*Silver, Burdett & Co.:* The Song Year Book. For intermediate and grammar grades. Compiled and edited by Helen Place. Introductory price, 50

cents. An Introductory Arithmetic. By David M. Sensenig, M.S., and Robert F. Anderson, A.M. Introductory price, 40 cents. The World and its People: Book XII, Porto Rico. By J. B. Seabury. How the People Rule. By Charles de Forest Hoxie, Pd.M. Introductory price, 40 cents.

*Ginn & Co.*: International Modern Language Series: Elementary German for Sight Translation. By Richard Clyde Ford. Schucking's Die Drei Freier. Edited by Otto Heller, Ph.D. The Louisiana Purchase and the Exploration, Early History and Building of the West. By Ripley Hitchcock.

*Hinds & Noble*: The Beginner's Cæsar. By Harrison Dickinson Cannon. Howe's Handbook of Parliamentary Usage. Price, 50 cents, postpaid.

*Longmans, Green & Co.*: Education as Adjustment. By M. V. O'Shea. Price, \$1.50.

*E. L. Kellogg & Co.*: Art of Class Management and Discipline. By Joseph S. Taylor, Pd.D. Education Through Nature Study. By John P. Munson, Ph.D. Price, \$1.25 net; postage, 10 cents.

*Government Printing Office*: Annual Reports of the Department of the Interior for the Year 1902. Volume II. By The Commissioner of Education.

*Wright & Co.*: Thou Art the Man. By Frederic W. Pangborn.

*C. A. Koehler & Co.*: El Grau Galeoto. By José Echegaray. Edited by Aurelio M. Espinosa, Ph.B. Price, 75 cents; postage, 7 cents.

*D. Appleton & Co.*: Twentieth Century Text-books Series: A History of the Middle Ages. By Dana Carleton Munro.

*J. B. Lippincott Company*: Lippincott Educational Series: The Educational Theory of Immanuel Kant. Translated and edited, with an introduction by Edward Franklin Buchner, Ph.D. (Yale).

*D. Van Nostrand Company*: The Metric Fallacy, by Frederick A. Halsey; and The Metric Failure in the Textile Industry, by Samuel S. Dale. Price, \$1.

*The Round Table Press*: The Complete Anas of Thomas Jefferson. Edited by Franklin B. Sawvel, Ph.D.

*The Book-Lover Press*: The Red-Keggers. By Eugene Thwing.

*Paul Elder & Co.*: Mosaic Essays: Happiness, Success, Nature, Friendship, and Consolation.

*The Rolling Stone Club, Medina, N. Y.*: Europe on \$4 a Day. By A. Rolleston. Price, 25 cents.

*Whittaker & Co., London*: An Easy First French Reader. Price 75 cents net.

## Periodical Notes

In the February *Atlantic Monthly* Mr. Clarence H. Poe writes convincingly on "The Dangers of Lynching."—The Macmillan Company publishes the *Burlington Magazine*, which has become famous during its two and a half years of life for its beautiful reproductions of all sorts of rare objects of art, the real appreciation of which is confined chiefly to the connoisseur.—Mrs. Theodore W. Birney gives in the March *Delineator* some very useful suggestions about "Children's Books and Reading." In the same magazine, a "New Physical Culture for Children" is described by M. Wilma Sullivan.—"The Carlisle School," by Lilian C. Paschal, in *The Designer* for March, describes most entertainingly how the descendants of the original lords of North America are being turned from the wide ways of savagery to the straight and narrow paths of civilization.—And the interesting pictorial series, "The Arts and Crafts in American Education," by Abby L. Marlot, in the February *Chautauquan*, will interest our readers.—"The Tsar: A Study in Personality," by Arnold White: See *Everybody's Magazine* for March.—In *Scribner's* for March, Edith Wharton, in "The Descent of Man," depicts with humor a college scientist who became a popular author.

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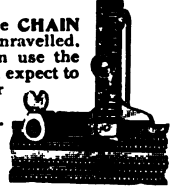
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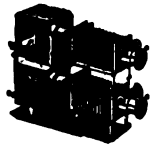
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In *EDUCATION* for May, Superintendent William E. Chancellor, Bloomfield, N. J., will present an able paper on "The Supervisorship"; Mr. Henry Lincoln Clapp, Boston, Mass., will write of "Music in the Elementary Schools"; Dr. John Ogden will conclude his able series of "Lessons in Genetic Psychology and its Relations to Modern Pedagogy"; Mr. William E. Long, of New York City, will describe "The Application of the Binocular Photograph to Geography Teaching"; Miss Alice Ranlett, Auburndale, Mass., will write instructively and entertainingly of "The Passing of the Spelling Book"; and Assistant Professor C. G. Bullock, of Harvard University, will contribute a paper on "The History of Economic and Political Studies in Williams College." The Editorials, Foreign Notes and Book Notices will complete a valuable number.

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### TABLE OF CONTENTS

|                    |                      |                           |
|--------------------|----------------------|---------------------------|
| Architect's Fees.  | Fences.              | Temperature.              |
| Assembly Rooms.    | Flooring..           | Toilet Rooms.             |
| Balustrade.        | Floors.              | Trees and Shrubbery.      |
| Basement.          | Floor Plans.         | Ventilation.              |
| Blackboards.       | Foundations.         | Walls—Plastered.          |
| Boiler Rooms.      | Hand Railings.       | Wardrobes.                |
| Building Material. | Height.              | Windows.                  |
| Ceilings.          | Humidity.            | Window Shades.            |
| Chalk Troughs.     | Humidostats.         | Wood Finish.              |
| Chimneys.          | Janitor's Room.      | Etc., Etc., Etc.          |
| Class Rooms.       | Lighting.            | Heating and Ventilation.  |
| Cloak Rooms.       | Material.            | Methods of Heating.       |
| Coal Bins.         | Metal Work.          | Furnace Heating.          |
| Corridors.         | Partitions—Movable.  | Steam Heating.            |
| Desks.             | Principal's Room.    | Natural Ventilation.      |
| Doors.             | Roofs and Roofing.   | Mechanical Ventilation.   |
| Drainage.          | Sites (location).    | Required for Ventilation. |
| Dust Flues.        | Sites (how secured). |                           |
| Entrances.         | Stair Cases.         |                           |
| Elevators.         | Steam.               |                           |
| Equipment.         | Teacher's B'kcases.  |                           |
| Excavations.       | Teacher's Room.      |                           |
| Exposure.          | Teacher's W'drobe.   |                           |

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¶ 1. The demonstrations found in present texts are too lengthy and tedious to appeal to the beginner. They cannot, therefore, help being obscure, ambiguous, and loosely constructed, and worst of all, abstruse. Long demonstrations can be appreciated by mathematicians, but they only serve to confuse and discourage the beginner, and to imbue him with an aversion for the subject. He is generally lost before he gets to the end of the proof. At best, he can not remember the proposition, even though he may learn it for the moment.

¶ 2. The authors of these texts have neglected to preserve the continuity of the subject, and the interlocking relations between the propositions. The beginner thus sees the subject in the light of a fragmentary string of disconnected facts, and derives neither pleasure nor profit from its study. In short, the student fails to catch the spirit of the subject-matter.

¶ 3. They have made little or no attempt to train the student to attack original exercises. He has become accustomed to repeating demonstrations from the book, and when confronted by an original exercise, is at a loss to know how to proceed. He approaches it from every direction with equal failure, and is naturally disheartened by his inability to apply his knowledge.

¶ 4. From the faulty formation of the proofs the student acquires a tendency to memorize literally. This practice is prejudicial to *his subsequent progress in mathematics*. He draws little benefit

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from his study, and generally knows less at the end than he knew in the beginning. The purpose of Geometry is not to exercise the memory, but to train the observation and the faculty of reasoning. History is a better subject for memory work. We might add that many of our best secondary schools have been obliged to discontinue the use of text-books in teaching Geometry. Numerous other weaknesses could be pointed out that have contributed to the downfall of the books in question.

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# EDUCATION

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of Education*

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## *A New Educational Ideal*

*As shown in the Y. M. C. A. Training School at  
Springfield, Mass.*

PROF. H. M. BURR, DEPARTMENT OF HISTORY



WE are living in a period of reconstruction. This is peculiarly true in the field of education. Some of these reconstructions amount to revolutions. Curricula, educational ideals, methods, and machinery are in a state of constant change. None of the old educational orthodoxies are sacred enough to be secure. Old school pedagogy and new school pedagogy wage inky warfare in our magazines and newspapers. Trustees, faculties, school boards, find themselves becoming debating societies. Even taxpayers and the general public ask new questions, make new demands, and impose new conditions. It causes serious inconvenience, but it is increasingly clear that the present discussion and experimentation is widening our educational outlook, and making our educational methods more wise and effective.

This being the situation, educators cannot fail to be interested in experiments in education from which they may gain hints which may be of value in settling some of their own special problems. This will be a sufficient excuse for a description of

some of the educational ideals and methods which are being worked out at the Training School of the Young Men's Christian Association in Springfield, Mass.

The central thought of its educational program is that "The proper study of man is man." This does not throw any discredit, even by implication, upon the study of the natural sciences. We simply insist that man gives meaning to nature, and the exigencies of our special work compel us to emphasize the "humanities" rather than the natural sciences in our curriculum. In doing so we are really developing an old idea. Some of the old-time universities were called "Schools of the Humanities." Our ideal is to develop a modern "School of the Humanities" for training men for social life and social service.

It is the first article in our educational creed that it is the function of education to develop man on all sides of his nature—the physical, the mental, the moral, and the social.

The following syllabus will give a general idea of the course of study, omitting such studies as relate simply to the methods of work and organization of the Young Men's Christian Association.

#### THE NATURE OF MAN.

##### I. Physical.

1. Anatomy. *a.* Macroscopic.  
*b.* Microscopic.
2. Physiology. *a.* Physiological Chemistry  
and Physics.  
*b.* Physiology of Exercise.
3. Hygiene. *a.* Public.  
*b.* Personal.
4. Physical Examination. *a.* Anthropometry.  
*b.* Physical Diagnosis.  
*c.* Prescription of Exercise.
5. Physical Training. *a.* History and Philosophy.  
*b.* Gymnastic Pedagogy.

**II. Mental.**

1. Psychology.
  - a.* Physiological.
  - b.* Genetic.
  - c.* General.
  - d.* Religious.
2. Pedagogy.
  - a.* History of Education.
  - b.* Principles of General Education.
  - c.* Principles of Religious Education.
3. English.
  - a.* Composition.
  - b.* Literature.
  - c.* Public speaking.

**III. Moral,**

1. Ethics.
2. Bible.
  - a.* Old Testament.
  - b.* New Testament.

**IV. Social,**

1. Sociology.
2. Economics.
3. Civics (Municipal Problems).
4. History.
  - a.* Civilization.
  - b.* Religions.
  - c.* Christianity.
  - d.* Movements for Social Betterment.
    - (1) Missions.
    - (2) The Y. M. C. A.
    - (3) Social Settlements, etc.

This covers the general scheme of study on the theoretical side. Every effort is made to put principles into immediate practice. An hour and a half each day is given to work in the gymnasium or athletic field, both to maintain a high level of physical vigor in the students themselves, and also to train them to scientifically develop the same in others. Practically all the men are engaged in some form of philanthropic, religious, or educational work outside of school hours. During the senior year every man makes an inductive study of some problem—physical,

educational, or religious. The following are some of the problems which have been studied in the last two years:—

“The Religious Life of Boys;” “The Saloon and Young Men;” “The Effect of Exercise on Blood Pressure;” “Physical Exercise for Boys;” “The Workingman and the Church;” “The Life of Street Boys;” “The Development of the Social Instinct in Boys;” “Moral Effects of Physical Training;” “The Social Life of the Industrial Class;” “The Boarding-house Problem in City Life,” etc.

The specific aim of the school is to train men for work in the Young Men’s Christian Association, schools, and colleges, either as secretaries or physical directors. But in doing so we believe that we have developed an extremely effective type of general education. A glance at the syllabus of studies will show that there is no time given to the study of Latin or Greek, and that the purely physical sciences, except as they are directly related to physical education, are omitted.

No attempt has been made to cover the whole field of education. We have not desired to develop a new kind of college. We believe most heartily in college and university education. Some of our men are college graduates. We do believe, however, that it is to the advantage of the whole educational movement to have different types of education developed to meet the needs of differing groups of students. We believe increasingly that there is a large group of men who can specialize on the “humanities” to advantage. As a matter of experience we do not find that a knowledge of Latin or Greek is necessary, however advantageous it may be, for the intelligent pursuit of such studies. All theories apart, it is clear that men may acquire mental discipline by the scientific study of physiology, psychology, economics, sociology, and related studies, as well as through the study of language and mathematics.

More than this we are coming to feel that the “logic of circumstance” has led us to emphasize an element of education which needs emphasis. One of our leading educators said not long since, in a public lecture, that the weak point of our present education is that it is too “individualistic,” and fails to develop in a large number of students the “social spirit.” The

supreme object of education from the standpoint of state, which pays the lion's share of the bills, is to develop men and women who have not merely individual capacity, but also a sense of social responsibility. Our leading teachers in school, college, and university are recognizing more and more clearly that education fails unless it develops the truly social spirit, which enables the individual to fit harmoniously and helpfully into the social life.

Our ideal is to develop an educational institution which shall develop the social spirit and the capacity for social service in a high degree by concentrating attention and effort upon the subjects which have directly to do with man's constitution and conditions—the forces which make for his physical, mental, and moral development, and the principles which should control and direct men's relations with men.

So much for the considerations which have led to the development of our general scheme of education. Something needs to be said as to the treatment of special subjects from this general view point.

All the studies which have to do with a man's body and its development are shaped by this thought, which is not new, but given a new and more emphatic emphasis, *Mens sana in corpore sano*. Mental and moral power have a direct relation to physical condition. Physical vitality and control give to the mind and character an adequate means of expression. Some one has defined genius as "power to work"; and power to work depends in a far greater degree on physical conditions than most men dream. A careful study of the men who are leaders in the political, business, and educational life of to-day shows that they are, for the most part, men who have either inherited or developed a high degree of nervous vitality. It is the steam in the human engine which gives it power to work. It is of the greatest importance, then, that this dynamic quality be conserved, developed, and handed down to coming generations. As so large a proportion of our population must live and work under the necessarily artificial conditions of city life, it becomes increasingly necessary to make the conservation of energy a matter of careful thought and an integral part of our system of education.

This need is being so strongly felt that there is a demand from universities, colleges, and schools for carefully trained teachers of physical education, which cannot as yet be met. Athletics and gymnastics in our colleges and schools have been of great value to those who already had physical strength and ability, but the average man, who most needed physical up-building and discipline, has been neglected. It will not be long before physical education will be as common and as scientifically directed as education in the physical sciences.

The necessity for preserving the vitality of the race is a sufficient argument, but there is another argument of equal weight. Muscular activity is directed by brain and nerve activity, and the muscles which are vigorous and disciplined react upon the nerves and brain, and give tone and power to them. This does not mean that to make a man an athlete will make him a man of brains; but it does mean that physical power may be made to contribute directly to brain power. This is not merely rational theory. Its validity has been demonstrated beyond question in our educational experience.

The influence of careful and scientific physical education on character is even more marked. A strong and well directed will is essential to a strong character. Physical health makes moral health easier. Anything which makes for physical health makes also for moral health. More than that, self-control may be learned through the control of the nerve and the muscle. Often that is the easiest and most effective place to begin the educative process.

And we may go still further. Physical education may be made a means not merely of developing brain power and will power, but also of developing the altruistic and social qualities which are so necessary to good citizenship. The group games, such as football, baseball, basket ball, hockey, etc., when played under proper direction develop not merely vigor and skill and courage and resourcefulness, but group loyalty—the willingness to sacrifice oneself to the good of the others. It is profoundly interesting to a teacher to see a man by nature self-centered, self-conscious, and timid, develop in manliness, courage, unselfishness, under the influence of such games. They

are play, but fortunately play has been nature's great educative force. Now we are becoming intelligent enough to utilize it in our educative systems.

Recognizing the profound influence which sports have upon students in school or college, we have systematically developed loyalty to the ideals of "clean sport" among our students, and pushed the "clean sport movement." A large part of social morality and so of good citizenship is playing the game of life according to the "rules of the game." Clean sport means clean politics and clean business.

There need be no apology, then, for making physical education an integral part of our educational system and putting it on the same basis as other types of education. We do not claim any monopoly of the idea, but we have been in a position to put it in practice more fully than any other institution. We are more than satisfied with the results,

It is next in order to show how our point of view influences the teaching of such subjects as English literature, history, the Bible, psychology and sociology.

English literature might seem at first thought to be debarred from a curriculum centering in the study of man, but only at first thought. The best literature of any nation is simply the crystallization of its noblest thoughts, truest ideals, and deepest experiences in beautiful and appropriate form. It is the key to the inner life of a nation. In a true school of humanities literature will be studied, not merely because it is the most direct way of developing the power to use language effectively, but because it interprets life. There is no more effective way to study literature than to study it as an expression of human life. Good literature is, then, only that which gives appropriate expression to that which is good in human life. Studied in this way literature becomes a mine of information and a spring of inspiration. Such a method makes the affectation and dilettanteism which has so often discredited literary studies an impossibility.

The study of the English Bible must hold a large place in any such course of education. It must take such a place because of its literary merit. The Bible ranks first among the books of the world. The Bible is the great English classic, illustrating in



its sixty-six books masterpieces of prose, poetry, history, biography.

But the literary value of the Bible is small compared with its moral value and its value as an interpreter of civilization. The study of the Old Testament is an introduction to Oriental life and thought, to the mighty empires and movements which contributed much of the raw material of civilization. A study of the origin and development of the religion and ethics of the Jews leads to the discussion of the profoundest questions of history, psychology, philosophy and religion.

More than this, in any study of the "humanities" the study of Jesus Christ, the ideal man, must be central. "In him ancient history culminates. From him modern history flows." One who would understand human history and life must study the record of his life with scientific thoroughness. He should study the meaning of the words which were such as never man spake, and the relation of the first "interpreters" to their master.

In order to secure the largest educational returns from the study of the Bible, we believe that it must be a genuine, inductive study of the Bible itself, not a course of lectures about the Bible. We do not use text-books presenting compendiums of sacred history or Christian doctrine, but the Holy Scripture itself, with all its infinite variety of human interest and spiritual suggestion. Such a study carried on daily for two years educates thought, imagination, reasoning power and the moral and spiritual nature to a high degree.

History, which should be the most intensely human of all the humanistic studies, has an unfortunate history of its own which must be lived down before it can take its proper place in education. History has been taught for so long as if it were simply a catalogue of dates, battles, generals and kings, dry enough to absorb all the enthusiasm of the average student, that the very word history suggests to many nothing but the dust and ashes of antiquity. Fortunately a new and better method is making itself felt, but there is still room for improvement. The vital relations of the history of the past to the life of the present must be made more apparent. This can only be done when history is studied as the record of human progress, from which we can

discover the nature of the forces that make for progress. In other words, history should give us the equation of the curve of human development. It is one of the greatest educational discoveries of the past century that every living thing must be studied in the light of its origin. Man is no exception. History is simply the story of man. It is the story of the development of his body and mind; the story of his struggles and achievements. History deals with the origin and development of all those activities which the other humanistic sciences deal with in detail. It should then be made a basic study in any scientific system of education, and especially in one centering in the study of man.

It has been the custom to study history from the standpoint of political institutions. It is a part of our educational creed that history may be more profitably studied in its relation to the development of civilization, laying greater emphasis on arts, industries, literature, ideas, religion, than upon wars and politics. The great mass of mankind are influenced most directly by the conditions of their home life, their industrial life and their religious life. We do not underestimate the importance of the development of political institutions, but it is our aim to trace most carefully the growth of the home, the growth of industry and commerce, and the growth of religious institutions and activities. Special study is given to the relation of Christianity to civilization, and to such movements as the Young Men's Christian Association, the social settlement movement, missions, and philanthropic movements. Experience shows that history has a new interest and influence when studied from this view point.

In the study of psychology, which must be given an important place in such a curriculum, special attention must be paid to physiological psychology because of its direct relations to the problems of physical education, and also because of the training which it furnishes in scientific observation and method. Genetic psychology and the study of the laws of mental development are a necessary preparation for the study of the pedagogy of general education, physical education and religious education. For men who are preparing for some form of philanthropic

work this branch of study naturally culminates in a study of the psychology of religion.

We share in the growing conviction that religious education has been sadly neglected because of the fear of real or apparent sectarian proselytism. Parents have increasingly thrown the responsibility of religious training on the schools. Sectarian rivalry has driven it out of our public schools. The Sunday schools reach not more than twenty per cent of the children, and in some cases less than that. Add to that fact that instruction in our Sunday schools is confessedly on a far lower level than that of our public schools, and it ceases to be a matter of wonder that a large part of our population is religiously uneducated. Such a situation is an anomaly for a professedly Christian people who even stamp on their coins, "In God we trust." It is surely time that the same painstaking study be given to the principles of religious education that is being given to secular education. We look forward to the time when religious training, in the large catholic sense, shall be considered a necessary part of general education, because, in the long run, it is impossible to separate religion and morals.

Another reason for more thorough study of the principles and methods of religious education is this: We are beginning to see that conversion normally marks only one of a series of steps in the development of Christian character, though it be the most important. It must be preceded by a process of education and it must be followed by a process of education. This being true, a careful study of religious pedagogy should be a part of the training both of the teacher and of the religious leader.

The place which sociology should have in the curriculum of a school of the humanities is so obvious that little need be said. The study of sociology in its more abstract and philosophical form belongs to the university. The average student needs a knowledge of the more concrete economic and social problems which he will have to face, and the methods of the most successful agencies for social betterment. With the enormous increase of urban life the special problems of the twentieth century city demand special attention. In our course two terms are

given to economics, one to social organization and activities, and one to municipal problems.

This course of study which has been outlined has gradually developed during the seventeen years of practical experience in training men for positions in the Young Men's Christian Association, colleges and schools. It has been constantly developed and modified and will doubtless continue to be so, but our experience seems to us amply sufficient to prove that the idea of centering the studies of a curriculum in the study of man is an idea worth still further developing.

### *April*

Tearful April,  
What's the matter?  
Has March been too rough—  
Spoiled the seeds and torn up roots,  
Nipped the budding shoots?  
  
Be not troubled, you have flowers  
Full of sweet delight.  
How we love to watch their colors  
Coming into light!  
  
They, perhaps, first sang the rhyme,—  
Who can tell,—  
"April showers  
Make May flowers."  
Oh, the glad springtime!

## Lessons in Genetic Psychology and its Relations to Modern Pedagogy

JOHN OGDEN, LL.D., MINNEAPOLIS, MINN.

### III



THE last article on the above subject dealt with two general groups of mental powers, viz., first, "*The Presentative*," or those concerned in the origin and presentation of thought, as perception and apperception, conception and intuition; second, "*The Representative*," or those concerned in reflecting and representing it after it has been formed and presented in mind, as consciousness, memory, imagination and phantasy, though the latter is not a legitimate faculty.

We now have to consider the "*elaboratory or rational*" powers, or those concerned in the elaboration of formal thought and its adjustment in formal statements, and its power to reason and carry conviction in those statements. The first to be considered in this group is:—

#### DEFINITION XII

*The Understanding*, a general power of the mind, as a whole, to *apprehend* truth in any of its forms, and to *comprehend* it in all its legitimate relations. It is the knowing power of the mind as a *complex unit*. It is the united activity of the intellect itself in the pursuit of knowledge. Nay, more, it also implies the activity of sensibility and will, in such degree as to stimulate all other powers; and as such, it is entitled to a place with its compeers, judgment and reasoning.

#### REMARKS AND ILLUSTRATIONS

1. While this power of the mind is not now regarded as a distinctive faculty, being simply a united power, or peculiar conjoint activity of perception, apperception, conception, intuition, memory, imagination, and even judgment and reasoning, all appearing in consciousness; yet its primary functions as the *conjoint activity* in thinking, embodying many distinct forces,

as apprehension and comprehension — hereafter noticed — it seems to me, sufficient to warrant a separate consideration.

2. It is also regarded as the *investigating* power. Like the bee in search of honey, penetrating the depths of the flower, emerging therefrom laden with spoils, and all aglow with the investments of flower dust ; so the mind, through the united activity of its powers, penetrates the very substance and soul of truth, and returns not less glorified with investments and laden with the richer spoils of knowledge.

3. Its two general processes may be stated as follows : —

*a. Apprehension* = *ad* (changed to *ap*), meaning to or towards, *pre* meaning before, and *hendere*, to seize, all meaning, literally, to lay hold upon, or seize beforehand, and in this case, to lay hold upon knowledge in mind — for the purpose of further investigation and clearer understanding ; and

*b. Comprehension*, which simply changes the first prefix *ad* to *con* or *com*, meaning a closer relation, as *together*, *with*, etc., conveying the idea of a more complete and permanent possession of the concept and knowledge of the truth and its relations.

4. The whole process might be illustrated as follows : —

As the eagle first seizes upon its prey (apprehends it), and then proceeds to some safe retreat where he devours it (comprehends it), puts himself on the outside of it, so to speak, makes it a part of himself ; so the mind in pursuit of knowledge, or in the process of complete thinking, understanding, first seizes upon a truth or proposition (apprehension) and then proceeds more leisurely to investigate, to analyze and *comprehend* it (devour it) until it becomes a part of the mental furniture, just as food becomes a part of the body.

NOTE.—This becomes a true test in teaching. Too many pupils rest satisfied with mere apprehension, holding, as it were, the truth in the claw of memory, being satisfied to *say* rather than to *know and do*.

#### DEFINITION XIII

*Judgment*, as a faculty of the mind, is the power it has to form conclusions and decisions upon any subject of thought, usually based upon evidence or testimony requiring the use of

comparison and discrimination as helps to conclusions; and to express facts and general truths in some systematic form.

#### REMARKS AND ILLUSTRATIONS

1. JUDGMENT, as an *act* or process of the mind, is the formation of an opinion: as a *product* of the mind, it is a formal statement of a fact, inference, experience or opinion. It requires all the thinking powers to form a judgment.

2. All judgments, in this sense, are formed by a comparison of contrasts and similarities, however slight these may be, in which intuition furnishes the basis of self-evident or axiomatic truth. *This* thing is not *that* thing is the basis of all discrimination and inference.

3. Hence the order of all thought movement is "From the known to the *related* unknown." (Illus.)

a. "*What is it?*" is the first inquiry of the human mind, and consequently the answering of it constitutes the first step in thinking. As the mind struggles to *know*, other and similar inquiries are begotten. The study of things (physics) is therefore the first study for the child: and how eager he is to know things and their designations—*names*. Reading from text-books is therefore by no means the first study in the correct process of learning.

b. "*Where is it?*" is perhaps the second point of inquiry, as direction and distance must early be determined, giving or determining location in space. This gives rise to topography or the knowledge of places, which soon ripens into geography, which is naturally among the first studies of childhood—not the geography we find usually in books, but as we find it in places and in the earth itself. This gives also the requisite bodily exercise, and *language* comes here as a necessity, not as an imposed task. It never should become such. Language is therefore incidental.

c. "*How many?*" is perhaps the third step in child inquiry and thinking. This gives rise to number lessons or exercises which readily accompany lessons on things and their places, or physics and geography. Thus we have the three important studies, *physics, geography and mathe-*

*matics*, all accompanied by language as a necessary medium in thinking; and all this is prefigured and represented in the child's necessities.

d. "*What use or value?*" probably constitutes the fourth step or inquiry in child thought. It leads directly to the industries of the earth. The natural inclination of childhood *to do something* is its most redeeming characteristic. Upon the proper gratification of this desire depends the child's future character and destiny. The door to child culture is set wide open here. Why not enter in at this door instead of breaking in in some unnatural way? [See "Lesson in Pedagogy."]

e. "*May I have some?*" is still another natural child inquiry. It is natural to desire possession. This inquiry represents or embodies the two great contending forces in human nature, especially child nature. The desire to possess a part in the world's affairs is commendable, but to possess the whole is reprehensible: and no desire for possession is excusable on the mere ground of selfishness, but that it may be used for the good of others. The two great contending yet reconcilable forces in human nature, viz., *egoism* and *altruism*, or selfishness and benevolence, must be harmonized at every step of the education of the child. The excess of the former has set mankind at variance in all ages of the world. The excess of the latter is scarcely possible.

NOTE. — Let classes discuss these two principles of human nature—their proper and improper uses in the affairs of the world—especially the true relations of "*Labor and Capital*." This topic will appear in our last article under "Modern Pedagogy."

#### DEFINITION XIV

*Reasoning* is a process of the mind whereby general judgments are construed, both in ordinary discourse and in argumentative disquisition, so that logical conclusions upon any given subject or subjects may be formed. It requires careful discrimination and close thought.



## REMARKS AND ILLUSTRATIONS

1. REASON, the basis of reasoning, is the *power* the mind has to form conclusions; and reasoning is the *process* by which this is carried on.

2. The process of reasoning is based upon intuition, as the mind naturally or intuitively assumes as true those things given, not reached, by intuition. Indeed, intuition is a species of reason without argumentation.

3. There are two general processes of reasoning, as follows:

a. *The Inductive*, in which the mind proceeds from the particular to the general, sometimes called the synthetic method or process; and

b. *The Deductive*, in which the mind proceeds from the general to the particular; called also the analytic process. Both are equally satisfactory, since the one implies the other, and since the conclusions reached are identical if the processes are properly conducted; for however slight the probability of the truth of a conclusion reached or inferred through a process of induction may be, when the individual cases of agreement are sufficient in number, the certainty of proof is as great or satisfactory as proof by deduction. Indeed, both methods have been criticised by recent writers. Even the famous "Dictum of Aristotle," viz., that "Whatever may be affirmed or denied of a class may be affirmed or denied of whatever comes under that class," has been called in question.<sup>1</sup>

c. *Analogical Reasoning* might be named as a third method of reasoning; but while it sets forth arguments analogically, or assumes a likeness or unlikeness as a ground for belief or conclusion, it only employs what may be included under one of the other two forms.

4. The syllogism, which is a formal arrangement of the terms of an argument by which logical conclusions are reached, is the formidable weapon of the latter process, to which all its statements may be reduced, and whose terms are recognized as

a. *Major premise*, making affirmation of a class of things, as all *men* are mortal; and

<sup>1</sup> John Stuart Mill. [See Mark Hopkins in his "Outline Study of Man."]

*b. Minor premise*, asserting that the individual belongs to this class, as *John* is a man; hence

*c. The conclusion*, assuming that what is true of the whole class is true of all individuals of the class—*John* is mortal.

5. There are several forms of syllogism which cannot be given here. They will be readily recognized by practice in logic. Frequently, however, the terms are transposed; but more frequently suppressed, being readily supplied in the mind of the writer or reasoner: as *John* is mortal, since all men are mortal, and *John* is a man. The major premise when stated formally always contains the conclusion, etc.

NOTE I.—It might be well for the learner to practice these transpositions and omissions in order to familiarize the mind with them. The main thing, however, in reasoning, is clear and concise statement, leaving the mind of the reader or hearer to infer and supply, if need be, the legitimate transpositions and suppressions.

NOTE II.—Reflection is sometimes regarded as a separate and distinct power of the mind, not a faculty, however, since it is only a special application of many mental functions for specific purposes. It is the continued turning back of mind in activity, dwelling upon its own movements in order to determine more accurately the soundness, value and fitness of its thoughts and conclusions, and often discovering new truths and applications. This latter, however, is a species of contemplation, or the continual dwelling of the mind upon some points in an argument. It is also known as concentration. All these are but parts of a reasoning process implying analysis and synthesis, deduction and induction, and requiring attention and interest, memory and imagination, comparison and discrimination, abstraction and differentiation, identification and unification, conception and classification; all of which are implied in different processes of reasoning. Reflection not only implies retrospection, but it may be accompanied by introspection and prospection, or a species of prophecy.

NOTE III.—Further illustrations of these mental phenomena will be given under a series of lessons on "The laws of mental growth," or the "Mind at work," pedagogy.

## *English as a Foreign Language*

ARLAND D. WEEKS, STATE NORMAL SCHOOL, VALLEY CITY, N. D.



HE teacher of English in any school has the hardest subject in the institution. His work is hard because of the unsettled ideas prevailing as to how to teach English, because he has to create an interest for a familiar subject in pupils who do not realize that they are grossly ignorant of their own language. When a pupil is initiated into Latin, he swells with academic dignity; he feels he is beginning a new era because he realizes his ignorance. His ignorance of English is almost as complete, but his ignorance is like the cold in North Dakota—"you don't feel it." Consequently a teacher must spend some time every day in demonstrating to classes in English that they do not know the subject without study.

To all mere children, to most high school and many normal school students, and to a considerable number of college students, and to nine tenths or more of the Anglo-Saxon race, English has the characteristics of a foreign language,—they do not know the meaning and use of English words; they cannot manage syntax; their expression is poverty-stricken and goes on crutches; the wealth of literature is to them inaccessible through lack of knowledge of words, syntax, and reading ability. Nice looking classes in secondary schools will fail in a body to get the meaning from one of Wordsworth's sonnets. English is a foreign language to those who cannot read intelligently English literature.

Shakespeare was well educated. Reuben Post Halleck, M. A. (Yale), who teaches school in Kentucky, says in his book on literature that Shakespeare used 15,000 words in his writings, while many uneducated persons do not use over six hundred words. Then as a matter of arithmetic the person who uses only six hundred words or thereabouts is about  $\frac{16000}{15000}$  educated in English.  $\frac{16000}{15000} = \frac{16}{15} = \frac{1}{15}$ .  $\frac{25}{15} - \frac{1}{15} = \frac{24}{15}$ . The person referred to is  $\frac{24}{15}$  ignorant of English or thereabouts; that is to

say, English is to him  $\frac{2}{5}$  a foreign language. This is the native land of a great many foreigners. Listen wherever you will and you will hear speech that is cramped, disjointed, monotonous, hide-bound, rigid, unexpressive, monosyllabic and puerile. The lawyers are about the only class who attempt composition in speech or use words that children may not understand.

Timon in *Timon of Athens* uses these words in characterizing the sycophants who had fed at his table during his prosperity, who had deserted him in his poverty and who came back to feed, believing Timon's fortunes were revived :—

“ Most smiling, smooth, detested parasites,  
Courteous destroyers, affable wolves, meek bears,  
You fools of fortune, trencher friends, time flies,  
Cap-and-knee slaves, vapours and minute-jacks ! ”

What a wealth of expression ! These ideas you might hear given in feeble, ordinary language thus : “ They were bad men,” or, “ They didn't deserve anything of Timon.”

Poverty of expression results in the overwork of helpless vocables. Nerve means variously calmness, dignity, courage, rashness, self-possession, effrontery, audacity, insolence, pugnacity, self-defense. The word helpful, just now greatly frayed out in current educational literature, means either stimulating, suggestive, broadening, enlightening, beneficial, instructive, refreshing, available, indispensable, advantageous or soporific.

The fact that English is rarely learned by those who attempt to speak it, that it is virtually an unlearned or foreign language, throws upon the teacher the important task of teaching words, words, words ; of developing facile and flexible expression and the power to manage sentences and to interpret literature, even as the student of Latin is charged with knowing what he reads.

## Pedagogical Defects of the Sunday School

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### II



IN secular teaching we have learned to consider the contents of the mind instructed, and to begin with that material which is near to the child's experiences. It must have some elements that are similar to those already in consciousness. In geography we begin with *Heimatskunde*, or home-knowledge, and make this a basis for the study of more remote countries. In history local events should form the starting point, and only gradually be extended to that which is remote. Now, I notice that in Sunday school work the child—the little tot—who knows not even the meaning of geographical location, is plunged into ancient geography and ancient history. Historical knowledge is presented, which is so far removed from the experiences of the child that it can have almost no meaning, and even that little sadly distorted. Although some of the stories of the Old Testament may appeal to little children of six to eight years old, there seems to be too little discrimination in their selection. What meaning such children can get out of the story of the Israelites following the pillar of cloud is an enigma to me. The relation of the Israelites to the Levites is impossible to be comprehended by the children.

Why cannot materials be selected that will give instruction in Christian principles, and that will be comprehensible to children? And why can they not be told in a language which children speak and understand? Of course the ancient forms should be later studied for their beauty, and for their historic and evolutionary value.

The entire teaching in the Sunday school is based upon the assumption that all study must be from the Bible. We have been sincere in the assumption, but let us stop and consider.

Is not the object of the Sunday school to train boys and girls to live Christian lives? Training involves knowing, feeling, and doing. Knowing what? Knowing the meaning of righteous, Christian living, and discriminating between it and wrong living. They must be instructed in examples of Christian living, and made to feel a desire to emulate that type of life above all else. The best example is in the life of the Master himself. Other examples we may find in all history, or even among living people. Not all examples of godly men may be found in the Bible. The literature of all times abounds in them, and many of the examples not chronicled in the Bible may serve to point out Christ-like men as well as any biblical literature. The death of our beloved President McKinley, which in its tragic aspects served to bring into greater relief his Christian life, I dare say, has done more to spread Christianity than years of sermons from biblical texts. Why? Because of its nearness to our life. What has not the good Queen Victoria accomplished for Christian living throughout the world?

The study of the Bible, it seems to me, is something like the source method in history; very desirable to give expanded meaning to narrower ideas which should be selected to suit the developing learner, and couched in terminology to be readily understood. But who would think of putting eight-year-olds at studying Massachusetts and Connecticut colonial records and Governor Winthrop's history for a first view of American history? Don't misunderstand me: I do not propose abolishing the Bible. It is a wonderful book. It is indispensable as a source for a complete background in appreciating the evolution of God's plan through all the ages. Though it contains truths which will illumine all the ages yet to come, we must not deny that it comes to us as a form of history, and should be a means to an end, not an end in itself. The point I wish to bring out is this: should we not in the earlier years attempt to teach Christian ideals as such rather than the history of Christian evolution? A study of Christian evolution will strengthen and clarify ideals at the proper time. To illustrate the method concretely: in secular history, in the first years of historical teaching which we design to make ethical, we start with biography and narratives

without reference to time or country. It may be the story of Abraham Lincoln to-day and of Alexander the Great or, if we were not forbidden, Saint Paul or Jesus to-morrow. Or, the order might be reversed without violating psychological needs. We select those that teach desired lessons, regardless of source. These are related orally in comprehensible terms and read from books written in language that the child can grasp. By and by the pupil takes up history chronologically and later philosophically, probably studying copies of original texts, but this method is an advanced method. Shall anyone say that history is made unreal because the original text is not at first used? As we make use of ethical material from all ages, may we not make use of material illustrative of the divine elements of character regardless of the age which produced it? To be concrete, why not also make use of other literature as well as the Bible in Sunday school work? There are volumes of poetry which are as truly inspired, says the Rev. Dr. Updike, as any of the scriptural writings. But who ever heard of using poetry in Sunday school? To be sure we have songs, some of them grand and soul-uplifting, but many of them inferior. Why not bring in much from all literature, and study characters from later writings than the Bible? The one thing desirable is to teach that Christian virtues and Christian fortitude are noble in all ages, and not something that are unreal or only for Bible times. Pulpit preaching is recognizing this, and we hear fewer doctrinal sermons and more illustrations of Christian living. Every church in the land almost has had several sermons relating to William McKinley. How many Sunday schools have laid aside the set lesson leaves and pointed to this noble example of a Christian disciple of our own time? All the day schools and many of the churches have Fourth of July exercises, Thanksgiving exercises, Lincoln days, memorial days, Washington's birthday exercises, etc. How many of the Sunday schools turn aside and have corresponding exercises?

The Hicksite Friends do not confine themselves in the upper classes to Bible lessons, but they deal sometimes with ethical or humanitarian subjects, one book used being Warner's *American Charities*. They also make use of a book of devotional powers,

and selections from Whittier's poems are considerably used. (Rep. of Com. of Ed., I, 1896-7, p. 389.)

Some advocate the study of pagan Bibles as well as the Scriptures now in use among us. They say that "Not to the Jews alone did the Great Soul of the Universe reveal himself. His divine hand as surely guided the thought and destiny of every race. To know our own Bible truly we must know those of other lands."

Incidentally the various forms of lesson leaves have been mentioned as not meeting the demands of modern pedagogy. They were first published to provide a well graded set of lessons upon the Bible and designed to furnish suitable selections, free from needless details and also free from really undesirable portions of Scripture. The aim was worthy, and in some measure has been realized. However, the form which these have taken has resulted in a very unpedagogical scheme of instruction. Continuity is so violated that no idea of historical sequence and unity can be gained. This would be pardonable if each portion taken formed a complete narrative, but even this is not true. Even though the Bible itself were taken as a text, the idea of continuity and sequence could not well be gained without much collateral help. The Bible is not a continuous record, being made up of fragments from the pens of a great number and variety of writers, and it is little wonder that it does not form a teaching book arranged on pedagogical principles. That is not its purpose. It is a source book of events. No source book can ever be an ideal text-book. Why cannot some modern Bible historian equipped with historical and pedagogical knowledge write a text-book of biblical history. More than that, may we not have a primary, an intermediate, and a higher biblical history? They should be written in a style attractive and intelligible to the class for which intended. They could be packed full of exact quotations, summarizing in the most beautiful way the eternal truths there chronicled. The Bible should not be displaced, but kept constantly at hand. Will this make the Bible itself less sacred and authoritative? Not a bit of it. It will become all the more real, vital, and soul-inspiring. Has our constitution, *e. g.*, become less important in



children's eyes since the study of civil government has been recast by abolishing the mere memorizing of the bare text and illuminating it with comments and applications? It is needless to say that books like John Fiske's *Civil Government in the United States* have intensified the interest in the study of the Constitution a hundred fold.

What we wish to secure is a permanent living interest in the Bible, and not a perfunctory perusal. Can we honestly say that this living interest is the usual outcome of Bible study as carried on in the Sunday school? I dare say that the form of the Bible itself, broken up into paragraphs as it is at the present day, is tedious. Now the lesson leaves increase the unattractiveness by beginning a story anywhere and ending anywhere. They sometimes throw in explanations at the top or bottom of a page, but they are put in with so many numbers, references to this authority and the other, that like the annotations of an edition of Shakespeare, they are not read with relish. What is desired for children at least is a continuous narrative illumined with all the light of modern scholarship, given with proper historical and geographical setting.

Then the questions, usually with set answers given upon each lesson, are of themselves sufficient to brand the leaves as unpedagogical, and designed for teachers without adequate preparation. In secular teaching the person who cannot frame his own questions upon a text, and determine whether answers are adequate or not, is deemed unprepared for his work. The arrangement of the lesson leaves in the above mentioned form reminds one of the school books of a generation or two ago. In support of my view I append a quotation from Mr. E. O. Vaile, editor of the *Intelligence*. He writes:—

“The International Sunday School Lessons are the most unphilosophical and unpedagogical school appliance now in extensive use. The persistency with which they hold their place is as severe a reflection upon church people and managers as was the old A, B, C method upon public school teachers. Our children go to Sunday school for years and come out with no clear and comprehensive knowledge of the Bible, its chief characters or its doctrines. What they get is a confused jumble

of dim ideas which are of no service either as an element of intelligence or as a guide to right living." Prof. Charles De Garmo writes that "it is quite possible for children to attend Sunday school from the earliest years until adult life without acquiring very much fundamental knowledge of the Scriptures." (Prin. of Relig. Ed., p. 63.)

Parenthetically I desire to inquire whether the unpedagogical methods as exemplified in the lesson leaves are not perpetuated by the publishers through lack of competition. If the Sunday schools would purchase and use teaching material from any publishing house that had a good article, *i. e.*, if there were free competition in writing and publishing Sunday school helps, would there not be an improvement? Why should any board dictate the particular form of lesson helps to be used in every church any more than the particular style of Sunday sermons? The publication of school text-books by a selected committee whenever tried has proven a marked failure, a notable instance being State preparation of school text-books in California.

The Sunday school fails to hold youths, especially boys, after they have reached the age of fourteen or fifteen. I believe that in part this failure may be ascribed to incorrect methods; that is, the boys do not find in the Sunday school that which excites normal interest or satisfies interests already possessed. No catechetical, memoriter method will satisfy adolescents. Many teachers in the public high schools fail because they do not adapt their methods to the adolescent mind. They attempt to drill facts and conclusions into the youth's mind expecting an unquestioning attitude, and are surprised to meet listlessness and rebelliousness. The small child can be drilled and made to take things upon authority. Not so the adolescent. Adolescence is rather a time for inspiration of soul, a time when dormant instincts bud forth, a time when an entire reorganization of forces, physical and spiritual, takes place. It is not a time for drill and formal instruction.

In response to the characteristic soul-hunger, there should be furnished to the unstable mind of youths that which can help them to find their natural affinities. The deeper truths of existence are yearned for and glimpsed. There is a moral and

religious ferment, and the loftiest and most sordid ideals struggle for mastery. Moreover, it is then that the human soul looks most anxiously into the future. Certainly it tries then, as at no other time, to learn its horoscope. This is a time for doubts and fears, as well as a time of frequent great religious zeal. It is a golden opportunity for initiating young people into the practical aspects of Christianity. Charity work, missionary work, relief societies, social settlement work, Y. M. C. A. organizations, etc., are turned toward with great eagerness.

The adolescent is very suggestible and ready to act upon slight suggestion. Hence the desirability of being alert to make wise suggestions, which once followed are acted upon with exceeding vigor. The central fact to be borne in mind is that, first, we are dealing with a being energized up to the saturation point, and, second, that this energy is in unstable equilibrium; it is ready to be touched off at the slightest stimulus. It is equally responsive to the suggestions from society, from the street, from the gang, or from the Sunday school and church; whichever becomes most attractive is followed.

Now apparently the Sunday school becomes unattractive to the adolescent, if we may judge from the decreased attendance. I believe more attractive plans would hold boys longer. In the first place, there must be more strong personalities in the teaching force—some one who is a leader upon whom they look in a knightly fashion; some one whose identification of thought and action makes him a living example of a Christian soldier; some one in whom they can confide yet respect; some one of whom they may ask questions that stir their soul's utmost depths; some one to whom they may take their doubts and fears, for this is the time for their outcropping; some one whose wisdom and judgment can give them steadiness and poise which they lack; some one whose knowledge may inspire and lead them to larger and more eternal truths. Throughout all schools we need the wisest teachers for children and youth. Instead we give them the most immature. Arnold of Rugby served the world far more grandly by teaching boys at Rugby than he could have done had he been a professor in classic Cambridge, or had he occupied the woolsack in the House of Parliament.

This is a time for teaching more cosmic truths, for introducing extended views of church history, which should show the constant evolution and permanence of the church universal. No more opportune time or place could be chosen for a course in Christian ethics. If the study were pursued in the same scholarly manner and with equally well qualified masters as in the colleges, there is no doubt in my mind but that it would hold young men and women in the Sunday schools. The biblical and church history should be presented in the best manner known to the teaching art. Maps, and charts, and stereopticon views should all be brought into requisition. A practical suggestion came under my own observation which confirms me in the above assumption. The Rev. Dr. Kiehle, pastor of the Calvary Presbyterian Church in Milwaukee, who had journeyed in the Holy Land, and who had made a long and careful study of the subject, gave a series of sermons illustrated by stereopticon views. As long as the series lasted the church had scarcely standing room, and boys and girls were among the most eager to see and hear. There must also be libraries of accessory books to enlarge and deepen the truths taught in the text. Home reading may be given and books reported upon.

Then music must be secured such as will be soul-stirring and uplifting. Various superintendents have testified that there is no factor more powerful in drawing, holding, and affecting pupils than an orchestra. Do not have the pupils listeners only. Get the big boys and most active ones to help produce the music. Then even in ordinary communities special choral exercises and thrilling part-singing may be had, and it will prove a powerful ally. I have witnessed it, even in country Sunday schools, under trained leadership.

The soul can be thrilled by music when reasoning would not be harkened unto. It is a misfortune that every Sunday school cannot have a boy choir trained by the best masters. To say nothing of the spiritual uplift to the boys and to those who heard them, they would receive an education in music. Few boys who have once joined an orchestra or choir, and received proper training, would care to drop out, and they would learn

to love the Sunday school through an active participation in it. The doctrine of participation is not clearly enough recognized.

"In the matter of utilizing music in America we are but slowly emerging from the results of the legacy of the Pilgrims and the Puritans, who cling closely to John Calvin's skirts. The prejudice against the organ died hard. As late as 1790, a wealthy parishioner of the Brattle Square Church, Boston, pleaded for permission to throw an organ, which the society had bought, into Boston Harbor, promising full reimbursement for the loss of the instrument." (Louis E. Elson, *International Monthly*, 4, 172.)

Along with this, may we not make much more of the dramatic instinct? It is one of the most fundamental instincts, but at present receives little or no cultivation except in special cases. I am not prepared to say just how it should be utilized, but I am convinced that it could be impressed into a high educational service. Just think how natural it is for children to dramatize situations and improvise plays. Everyone in adolescence undoubtedly aspires to be a play actor. Why not draft this instinct into the service of the church?—the stage developed as a form of religious worship. What we act we tend to feel; hence, one of the important values of religious ritual and ceremonial. I am not advocating that the theater be substituted for the Sunday school and the sermon. I mean, simply, that the dramatic instinct may be impressed into service as a means and a stimulus to religious feeling. It is safe to assume that so long as the Passion Play is enacted by the Oberammergauers they will never lose their religious fervor. Pres. G. Stanley Hall says, "What we need is a great artist who shall compose choral representations and religious drama, in which children shall take a part."

By all means try to kindle a white heat of religious enthusiasm in adolescence. This is the time when the foundations for all the great work of the world have been laid. The actual results, of which we read, come to full fruition in later life, but the germination and budding occurred in early adolescent years. This is the time to see visions and to dream dreams. The adolescent dreams are moreover prophetic of the real fruition of later life.

Lastly I wish to call attention to the necessity for fuller exemplification of Christian teachings. The value of the Sunday school must after all be tested by the results measured in terms of Christian character. The knowledge gained in the Sunday school or elsewhere is not made most valuable until it has given rise to activities in harmony with it.

From impression to expression is a fundamental law of education. The boy who learns how a word ought to be spelled and then misspells it every other time has not completed his education on that word. The boy who learns noble lessons from literature, is filled with worthy emotions therefrom, and then acts counter to those teachings, has not really learned the lesson. The boy who learns to denounce rascality in historical characters, and then goes out to the playground and cheats, lies, and terrorizes those weaker than himself, has only half learned the desirable lessons.

In just what way the Sunday school may furnish an opportunity to put its teachings into practice is a difficult question to solve. I shall not be able to offer at this time much as a positive contribution; but that does not invalidate my criticism nor remove the desirability of striving for the ideal. I think this is the vulnerable point of the public schools also. What the world needs to-day is not so much men of learning as men of character. I am frequently tempted to say that the world knows enough, but it is far from good enough, and lapses from virtue and righteousness are only infrequently from lack of knowledge. We must realize that it takes as much brains to pick a lock as to make one, and the usual deviation from the path of rectitude is more a result of undeveloped or stifled conscience than ignorance.

Now, inasmuch as will power and moral action at a given moment are so thoroughly dependent upon habits, it behooves us to early form habits of Christian living. In some way or other it is absolutely necessary to identify Christian principles with Christian practice. Mere Sunday effervescence of religious feeling and contemplation of desirable activities will not produce ideal character. Religion must be carried into the home, into the shop, the counting house; into public as well as private affairs.

Can we not enlist the services of our youth in definitely Christian enterprises, such as assisting the needy, relieving the suffering, protecting the weak, preventing cruelty to children and dumb animals, ministering unto the sick, bringing sunshine to minds clouded by sorrow and distress?

We need to emphasize more the gospel of service. The gospel of feeling has received its due share of attention. With proper service feelings will take care of themselves. Children should be taught that no man liveth unto himself, and that genuine desire to be of service to others is the highest ambition. President Eliot says: "The Christian doctrine is that service rendered to others is the surest source of one's own satisfaction and happiness. This doctrine is the tap-root of private happiness among all classes and conditions of men." To what extent junior clubs and kindred organizations should be encouraged is an important question, but one which I must refrain from entering upon at this time.

In some way or other the zeal which they imbibe must be carried into execution. Exalted feelings allowed to atrophy without giving rise to corresponding action are worse than if unfelt. Such lapses beget habits of apathy and unconcern. The Russian lady going into hysterical sympathy over the stage representation of suffering while her coachman is freezing on the box outside; Rousseau imploring the mothers of Europe to care for their babies while he sends his own five children one after another to the foundling hospital, are classical examples of what is meant.

Professor James tells us that we must lose no opportunity to put into execution every good resolution we form. On his theory we should never allow ourselves to have an emotion at a concert or at church without expressing it in some active way. We may not find heroic spectacular ways, but express it we should, if in no more heroic way than in speaking kindly to one's aunt or grandmother, or giving up one's seat in a horse-car. He says, "There is no more contemptible type of human character than that of the nerveless sentimentalist, who spends his life in a weltering sea of sensibility and emotion, but who never does a manly concrete deed."

Children should be taught that not the Pharisaical kind of service brings true happiness. Anyone, even an untutored savage, can exhibit courage, daring, or bravery under the stimulus of beating drums, the blare of trumpets and applauding multitudes, but it takes Christian training to give fortitude, perseverance, fidelity, absolute honesty, adherence to the golden rule, unswerving devotion to a righteous cause, etc., in the face of adverse circumstances, amid the taunts and jeers of companions, and unaccompanied by popular acclaim. Christian virtues must be practiced even though they do not secure a place for one's portrait in the newspaper columns, or cause one's praises to be sung by admiring companions. The positions which I have herein maintained are not entirely new and unheard of. They are rather reiterations of prophecies already in the process of fulfillment. Bible schools for the training of Sunday school teachers have already been established upon firm foundations; a new interest is being manifested in biblical history and interpretation; scholars and divines are uniting to test, revise and correct scriptural translations; men like Prof. Richard G. Moulton of Chicago University are trying to restore and make more attractive the literary form of the Bible which it lost during the Dark Ages; men with profound pedagogical insight are trying to adapt Sunday school instruction to the pedagogical needs of the child; scholars instead of untrained laymen or immature youth are being placed in charge of some Sunday school classes. Men like President Harper are experimenting in a practical way by superintending and teaching Sunday school classes; in some places the orchestra, the illustrated lecture, are made accessories; and in a few places superintendents and teachers are being paid. This last will come slowest. The day school teacher for centuries had to give street concerts, ring the church bell, dig graves, raise his own potatoes, play the mendicant, etc., in order to eke out a living. The minister of the gospel has only recently been put upon a definite salary basis. We are learning, however, that results are quite directly proportional to what we pay for.

One direction in which the new education is tending is that toward the identification of school training with life interests.



Too long have schools maintained the scholastic divorcement of their activities from life interests. The Greeks and Romans were wiser than we have been in this respect. Our past attitude has been a vestige of the period of world renunciation. But we are beginning to believe that education is not a preparation for life, but it is life itself, and all life is education.

When we shall recognize that religion is an instinct, and also recognize the unity of religious training with other forms of education, as home, school and civic education, we shall begin to identify religion and life, and life will be the fuller and richer therefor.

I have criticised the unpedagogical methods of the Sunday school, but I would not be understood as believing that Sunday schools alone are responsible for poor results. The public schools need a copious baptism of scholarship and much improved methods; and, finally, if there is one class of persons more than another who need pedagogical insight, it is the parents. More than trained public school teachers, more than trained Sunday school teachers, we need trained fatherhood and motherhood. All these I recognize, but my mission was to call attention to the Sunday school methods.



## *The Mean Proportional in the Problem of State Education*

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OME years ago in an address before the National Educational Association, President Eliot said, "The mass of the rural population—that is to say three-fourths of the American people—is unprovided with secondary schools." This problem is one which still merits consideration. In 1886 the state of Kansas, in order to give educational opportunity to this rural population, enacted a law which made possible the establishment of a county high school in counties having a population of six thousand inhabitants or over, "for the purpose of affording better educational facilities for pupils more advanced than those attending district schools, and for persons who desire to fit themselves for the vocation of teaching."

The method of procedure in establishing the county high school and of conducting the same is provided for in the enabling act. Under the provisions of this, when one third of the electors shall petition the county commissioners requesting that a county high school be established at a place named in the petition, or wherever the commissioners shall at their discretion think proper, they shall give notice twenty days previous to the next general election, or previous to a special election called for this purpose.

If the proposition receive a majority of the votes cast, the county commissioners appoint six persons, resident freeholders of the county, not more than two from one city or township, who shall with the county superintendent of instruction constitute a board of trustees for the school. At the next general election trustees are regularly elected by the people, their terms of office dividing them into three classes, serving one, two, and three years respectively, the respective terms being determined by lot. The levy for maintenance is limited to three mills, and for building to three mills. The county

high school is maintained by the entire county, and bears the same relation to the grades, both rural and urban, as the city high school does to the city grades alone. A certificate of graduation from the grades admits to the high school. Tuition is free to all residents of the county.

The three classes of instruction provided for are: a general course, a brief literary course designed for those who will not pursue academic studies further; the normal course, arranged for those who intend to become teachers—this course prepares for entrance to the first year of professional work of the State Normal School, and graduates from this course are entitled to teachers' second grade certificates, enabling them to teach for two years in their own counties; the collegiate course, as its name implies, is a complete preparatory course for entrance to the State University. Proviso is also made that should the number of students applying exceed the facilities of the school each township shall then be allowed its quota. Tuition is required of non-resident pupils.

These are the cardinal points of the law, and mark the legislation upon this subject until the year 1897. During this period, 1888-1897, three counties taking advantage of this act established high schools—the first one in Atchison County in 1888, the second one in Dickinson County in 1889, and the third one in Labette County in 1893. Other counties endeavoring to enjoy the privileges of this act were prevented, largely, as might be supposed, by the rivalry of towns contending for the location. The subject has been agitated in a large number of counties in the State, has been brought before the county commissioners, and in some cases has reached a vote of the people. While the additional taxation may have been a feature in the defeat, the fact that the upbuilding of the high school was liable to benefit some town or some part of the county at the expense of the other part, bears the greater responsibility for the relatively small number of high schools existing under this act proper. Upon this point it is interesting to note that the three schools above mentioned were established on terms of exchange carried out by two parts of the county. In Atchison County the east half of the county promised to give

the west half of the county a county high school, provided the west half in return would assist in building a court house at Atchison—the county seat located on the east side. In Dickinson County one part of the county received a county high school, and the other part bonds for a railroad. The same kind of railroad proposition was the grounds upon which the county high school was established in Labette County.

The county high schools of the State, however, are not limited to these three, but in addition there are county high schools in Clay, Lane, Norton, Thomas, Scott, Sumner, Montgomery, Cherokee, Sherman and Crawford Counties. These have, with exception of Clay County, all been established by special acts of the legislature. These acts in every case establish the location of the school and impose upon the city receiving the same certain obligations. For instance, in Sumner County, Wellington, the seat of the school, furnishes the buildings, free of rent, for a period of twenty-five years.

That other counties not included in the first law might enjoy the privilege of the county high school, the State legislature in 1897 added to the law of 1886, giving commissioners in counties of population less than that stated in the law, power to negotiate with public school districts at the county seat for establishment of a county high school in connection with the city schools.

In order that advanced students of adjoining counties may partake of the benefits of neighboring county high schools, the State legislature of 1899 added two paragraphs to the law, enabling school districts in counties not maintaining a county high school to levy a tax to pay the tuition of its resident high school pupils in a city high school in same county or in a high school in an adjoining county.

This article, then, will be confined to the workings of the high schools established under the regular act and created by special legislation. None of these schools have been established without some opposition. There have been, however, two excellent illustrations of the fact that with the existence of the high school and the full realization of its benefits, this opposition has disappeared. In 1893 the Atchison County High School burned, together with its contents. It would have been quite

possible at this time for the people to have presented objections and to have finally set the institution aside. On the contrary, there was a strong sentiment expressed for the speedy reconstruction of the building and the maintenance of the course of instruction in other quarters during the intervening period.

In Sumner County the school was established in the city of Wellington by special act of the legislature, in accordance with which the city of Wellington, the county seat, was to furnish the building free to the county for a period of twenty-five years. Thus the county high school, obviously, served the city of Wellington as a city high school. Upon this ground vigorous opposition arose against the high school in the other towns of the county desirous of maintaining their own high schools, and unwilling to pay for the expenses of the county high school at Wellington. The rural population it may be said, however, were almost a unit for the existence of the high school. The question of the further continuance of the school under the special act was submitted to a vote of the people, and a decision favorable to the school followed. Sumner County has twenty-one railroad towns besides Wellington, the county seat, hence it is not surprising that the favorable majority was small.

If these schools could be peripatetic, tarrying nowhere long enough to enhance the value of reality, or if rival communities could come to terms regarding the place of its location, it is not improbable that a county high school would be established in every county in the State. In every other respect the workings of the system are satisfactory.

The influence of the county high school upon the growing generations and its educational effects are points worth considering. The influences of the high school are measured to a large degree, although probably not always correctly, by the numbers in attendance. The records of three of the schools may be said to illustrate this for all.

TABLE I

TABLE OF ENROLLMENT AND TAX LEVY FOR THREE COUNTY HIGH SCHOOLS

ATCHISON COUNTY HIGH SCHOOL, EFFINGHAM, KANSAS

(Special and irregular students, such as in music and stenography, are not included in enrollment.)

| Year.   | ENROLLMENT. |        |        | GRADUATES. |        |        | Annual<br>Tax Levy. |
|---------|-------------|--------|--------|------------|--------|--------|---------------------|
|         | Boys.       | Girls. | Total. | Boys.      | Girls. | Total. |                     |
| 1891-92 | 90          | 62     | 152    | 1          | 1      | 2      | 1.7 mills.          |
| 1892-93 | 82          | 46     | 128    | 6          | 6      | 12     | 1.1 "               |
| 1893-94 | 57          | 69     | 126    | 9          | 11     | 20     | 1.1 "               |
| 1894-95 | 67          | 77     | 144    | 6          | 4      | 10     | 1.2 "               |
| 1895-96 | 71          | 78     | 149    | 5          | 6      | 11     | 1.2 "               |
| 1896-97 | 86          | 83     | 169    | 7          | 6      | 13     | 1.2 "               |
| 1897-98 | 57          | 72     | 129    | 8          | 13     | 21     | 1.2 "               |
| 1898-99 | 70          | 89     | 159    | 9          | 15     | 24     | 1.25 "              |
| 1899-00 | 62          | 77     | 139    | 3          | 11     | 14     | 1.25 "              |
| 1900-01 | 61          | 75     | 136    | 3          | 11     | 14     | 1.25 "              |
| 1901-02 | 74          | 66     | 140    | 5          | 12     | 17     | 1.5 "               |

NOTE.—The annual tax levy for 1890-91 was 3.5 mills.

DICKINSON COUNTY HIGH SCHOOL

| Year.   | ENROLLMENT. |        |        | GRADUATES. |        |        |
|---------|-------------|--------|--------|------------|--------|--------|
|         | Boys.       | Girls. | Total. | Boys.      | Girls. | Total. |
| 1889-90 |             |        | 137    |            |        |        |
| 1890-91 | 79          | 96     | 175    |            |        |        |
| 1891-92 |             |        | 181    | 13         | 11     | 24     |
| 1892-93 |             |        | 203    | 9          | 12     | 21     |
| 1893-94 | 125         | 129    | 254    | 9          | 10     | 19     |
| 1894-95 |             |        | 275    | 16         | 16     | 32     |
| 1895-96 | 107         | 106    | 213    | 6          | 19     | 25     |
| 1896-97 | 87          | 103    | 190    | 11         | 15     | 26     |
| 1897-98 | 106         | 92     | 198    | 11         | 12     | 23     |
| 1898-99 | 97          | 121    | 218    | 6          | 3      | 9      |
| 1899-00 | 117         | 66     | 183    | 6          | 12     | 18     |
| 1900-01 | 81          | 121    | 202    | 8          | 8      | 16     |
| 1901-02 | 86          | 104    | 190    | 8          | 6      | 14     |

NOTE.—Three mills for erection of buildings; 1-1.5 annually since for maintenance.

SUMNER COUNTY HIGH SCHOOL

| Year.   | ENROLLMENT. |        |        | GRADUATES. |        |        | Annual<br>Tax Levy. |
|---------|-------------|--------|--------|------------|--------|--------|---------------------|
|         | Boys.       | Girls. | Total. | Boys.      | Girls. | Total. |                     |
| 1897-98 | 150         | 200    | 350    | 5          | 1      | 6      | 1.25 mills          |
| 1898-99 | 165         | 200    | 365    | 6          | 7      | 13     | 1.25 "              |
| 1899-00 | 145         | 195    | 340    | 4          | 6      | 10     | 1.25 "              |
| 1900-01 | 150         | 205    | 355    | 10         | 19     | 29     | 1.25 "              |
| 1901-02 | 150         | 205    | 355    | 9          | 14     | 23     | 1.25 "              |

The attendance of the other schools is given in the last column of the following table, which goes to show the present status of the county high school system in this state.

TABLE II

| County.    | Population between Ages 5-21 in 1902 exclusive of Cities maintaining High Schools. | How Established.   | Instructors. | Departments. | Acres of Land. | Value of Buildings. | Value of Apparatus. |
|------------|------------------------------------------------------------------------------------|--------------------|--------------|--------------|----------------|---------------------|---------------------|
|            |                                                                                    | Under general law. |              |              |                |                     |                     |
| Atchison   | 4,380                                                                              | 1888               | 7            | 4            | 8              | \$30,000            | \$1,500             |
| Cherokee   | *13,675                                                                            | 1900               | 7            | 4            | 4              | 15,000              | 600                 |
| Clay       | 5,621                                                                              | 1900               | 7            | 7            | 2              | Leased 5 years      | 225                 |
| Dickinson  | 6,089                                                                              | 1889               | 7            | 7            | 3              | \$30,000            | 2,000               |
|            |                                                                                    | Special enactment. |              |              |                |                     |                     |
| Labette    | 6,304                                                                              | 1893               | 6            | 4            | 7              | 25,000              | 300                 |
| Lane       | 654                                                                                | 1902               | 1            | 1            | 5              | 18,000              | 2,000               |
| Montgomery | 9,598                                                                              | 1897               | 7            | 7            | 8              | 33,000              | 2,000               |
| Norton     | 4,879                                                                              | 1899               | 5            | 4            | 8              | 18,000              | 400                 |
| Scott      | 409                                                                                | 1901               | 1            | 1            |                |                     | 250                 |
| Sherman    | 1,194                                                                              | 1901               | 2            | 3            | 4              | Leased              | 100                 |
| Sumner     | 8,788                                                                              | 1897               | 9            | 8            | 4              | \$15,000            | 500                 |
| Thomas     | 1,587                                                                              | 1897               | 4            | 3            | 5              | 10,000              | 300                 |
| Crawford   | *13,641                                                                            | 1903               |              |              |                |                     |                     |

\*These counties have a large population engaged in mining and manufacturing.

| County.    | Volumes in Library. | Value of Library. | Receipts. | Expenditures. | Average Annual Expense per Student. | 1902 Enrollment. | Total Number of Graduates. |
|------------|---------------------|-------------------|-----------|---------------|-------------------------------------|------------------|----------------------------|
| Atchison   | 3,000               | \$3,500           | \$9,053   | \$7,130       | \$80 47                             | 140              | 158                        |
| Cherokee   | 500                 | 600               |           |               |                                     | 260              | 67                         |
| Clay       | 130                 | 140               | 8,523     | 8,135         | 35 37                               | 230              | 42                         |
| Dickinson  | 2,600               | 2,500             | 7,900     | 6,808         | 70 00                               | 190              | 227                        |
| Labette    | 500                 | 600               | 6,015     | 4,618         | 28 34                               | 163              | 199                        |
| Lane       | 500                 | 300               |           |               |                                     |                  |                            |
| Montgomery | 1,000               | 1,200             | 8,233     | 8,594         | 38 00                               | 224              | 77                         |
| Norton     | 500                 | 300               | 8,000     | 4,550         | 110 00                              | 126              | 37                         |
| Scott      | 50                  | 180               | 1,000     | 900           | 30 00                               | 34               |                            |
| Sherman    | 225                 | 100               | 2,300     | 1,740         |                                     | 64               | 5                          |
| Sumner     | 800                 | 1,000             | 9,018     | 7,809         | 22 00                               | 355              | 90                         |
| Thomas     | 300                 | 300               |           | 3,300         | 25 00                               | 123              | 24                         |

From this it will be seen that the enrollment ranges up to 377. Where do these students come from? Are they from the towns or from the rural districts, and let the rural districts in this case embrace the towns having not over 1,000 inhabitants? Where the county high school is not combined with the city high school at its location, in every case more than 75 per cent of the student body come from the rural districts. In view of this large rural representation, it is noteworthy that the number of boys should be so great. From the above table it will be seen that out of a total number of 466 county high school graduates, 199, or about 43 per cent, are boys. In some of the schools the number of boys in graduating classes materially exceeds the number of girls.

Another question is frequently asked, Can the rural population maintain a high school? Take, for instance, Atchison County: the city of Atchison, with a school enrollment last year of 2,066, has an enrollment in the city high school of 85, being 4.1 per cent. Atchison County outside of the city has a school enrollment of 3,339; the enrollment of the county high school was 161 or 4.7 per cent. It may be urged that private fitting schools and academies in the vicinity of Atchison affect her high school attendance. This may likewise be said to influence the attendance at the county high school.

In Sumner County, Principal Butcher states that of 377 enrolled in one year, 244 came from rural districts. The town of Wellington itself before the organization of the county high school had an enrollment in its high school of about 100, so that it can be said that the county high school proper in this county is made up almost exclusively of students from the rural districts.

The great majority of the students secure unfurnished rooms in the town where the school is located, at about a dollar per month, bring their furniture and provisions from home, in some instances turning these provisions into a common boarding table called a club. They return to their homes each Friday evening to bring with them new supplies the following Monday morning. Many of course ride or drive to and from their homes. From this it must not be inferred that the townships adjacent to the



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high school are the only ones represented, for tabulated statements from the various catalogues of these schools show that the representation from the county is quite general. The actual cash outlay to the students coming from these farm homes is shown by the table to range from twenty-two dollars to one hundred and ten dollars per annum.

The equipment of these high schools is significant. The cost of buildings ranges from ten to thirty-three thousand dollars. But brick walls, as is often said, are not the essential features in an institution of learning. The boards of trustees in nearly every instance have understood this, and have paid salaries sufficient to induce teachers of high qualifications to seek these positions. The principals receive an annual salary of from twelve to fifteen hundred dollars, and the assistants from sixty to ninety dollars per month. This has resulted in securing teachers of ability, college graduates who, in almost every instance, have secured the positions through merit alone. In such a corps of teachers, ample funds for laboratory appliances and library facilities, and student material such as comes from the farm homes, there unquestionably is a union of three educational factors conducive to good results.

It may be said that these same country students can attend the city high school; that the majority of them do not is a fact. And among the reasons for this is to be found, the country boy and girl do not feel at home in the city high school. They enter the city school, where friendships formed in lower grades have to a very large degree determined the associations of the city high school student. The country student as a rule does not feel at home. He seems to be under the impression that he is gaining an education through the courtesy of his city brother.

The conditions are totally different in the county high school. The most truly democratic spirit prevails. Students, all alike brought together from widely separated communities for the first time, form associations which become mutual as their course advances. They feel that the school is theirs because their fathers have paid for it. The city pupil, whose parent likewise having paid a share in the institution, feels his right of ownership, and at once there is evidence of an *esprit de corps*,

an influence which has much to do toward encouraging a student in attendance and advancement. Further, the student returning weekly to his home and receiving frequent visits from his parents, is at all times kept under the beneficial influences of the home.

Such an institution in a county indirectly manifests its worth upon the higher grades of teachers furnished the district school, and upon the incentives offered pupils to remain throughout the year in the district school and complete the course therein. Formerly it has been too frequently the custom for the older pupils to enter school at the beginning of the cold weather and drop out at the opening of the spring work. Struggling high schools in small towns are also replaced by this strong, vigorous institution.

This institution may also be said to yield a certain sociological influence, beneficial we may say, in bringing together the people of the different parts of the county at various gatherings during the year, such as commencement time and on the occasion of some noted entertainment or lecture features which are present in most of our county high schools. At these evening entertainments people living fifteen or twenty miles away are known in pleasant weather to make a practice of attending these gatherings. And still further its proximity creates a desire in the minds of the farmers' sons and daughters for an education; a desire which doubtless would never be stimulated were this institution absent.

The district school, it will be seen now, is brought in close contact with the county high school. The county high school articulates directly with the university, and here we have the system complete. The county high school bears the same relation to the county that the State University bears to the State. The county high school is the essential mean proportional in the educational system of the State. As the district school is to the county high school, so the county high school is to the university, the normal, and the agricultural college. If there were located in every county of the State one of these high schools there would unquestionably be a ready channel for the higher education of our farmers' sons and daughters.

The number who enter the higher institutions of learning is not as great as at first might be supposed, yet the percentage is probably equal to the quota that enter the high school from the grades and that leave the high school for the university. One cause of this may be the temptation to enter employment offered by the two-years teacher's certificate granted the graduates of the normal course. This certificate has undoubtedly prejudiced many in favor of the normal course who would otherwise have taken the classical course. From this standpoint some have questioned the advisability of granting these certificates to graduates of the normal course. It is obvious that students completing the normal course will be reluctant to return and take up the college preparatory course, thus barring themselves from higher education through choice of course in the beginning. It would be better for students to take the course for its educational value and then stand the regular county examinations if they desire to teach.

Here is what some of those who speak from direct knowledge have to say concerning the workings of this school system:—

The trustees of the Atchison County High School: "From an educational standpoint no man can estimate the value of the school to the county. From a financial standpoint the county high school has been a great blessing to the county. The money expended for secondary education is kept at home, and the amount necessary to educate a student is greatly reduced."

Principal T. W. Butcher, of the Sumner County High School, recently appointed a regent of the University of Kansas: "People here are enthusiastic for the school, except a few men who are not believers in free schools. I am an enthusiast on this subject, as every man must be who has opportunity to know what the county high school does for the country boy and girl. We have a dozen students in the University now who would not be there had it not been for this school. Scores and scores of others have caught a glimpse of higher things, and have gone back to their country homes to occupy a place in the community which they could never have filled had this school not opened the way to them."

The trustees of the Clay County High School: "The county

high school has already given an impetus to the common schools throughout the county by offering an incentive to continue study, and indirectly will react upon the pupils of the county by furnishing better educated and better trained teachers for our rural schools. It places the opportunity for a thorough practical education within the reach of every boy and girl in the county."

Principal Homer S. Myers, of the Dickinson County High School: "The school has done great things for the teachers of the county and for the upbuilding of an educational sentiment generally. There are here one hundred and fifty pupils who would not have attended a high school where tuition was charged."

Thomas County: "The county high school proposition met considerable opposition at the time it was brought up, but that has vanished. I know of no man or woman now who is not a friend of the school."

Carlyle undoubtedly had in mind the country scholar remote from educational facilities when he said, "This I consider a great tragedy; that one soul should remain in ignorance that had capacity for higher things." When the county high school prevails is it not possible that such tragedies will be of less frequent occurrence?



## *What are Sun Spots?*

NORMAN H. CROWELL, SIOUX RAPIDS, IOWA



WHILE the press is directing the public eye toward the dark blots on the sun's face, and calling attention to the effects on weather and other terrestrial phenomena supposed to be produced thereby, we may profitably spend a moment's time on the, as yet, unsatisfied query, "What are sun spots?"

A sun spot presents the appearance of an irregular opaque body interposed between the earth and the disk of the sun. It is distinguished from such, however, by its path of travel as well as the different apparent speeds as it crosses the visible surface of the sun.

Found almost invariably in a zone not exceeding twenty-five degrees on either side of the sun's equator, the sun spot is first seen entering at the sun's eastern limb. It advances steadily toward the western limb in a slightly oval course, due to the inclination of the sun's axis to the ecliptic. At first it appears to travel slowly for the reason that it is advancing practically straight toward the observer. Presently, upon swinging into the broad central field of the sun, its speed accelerates, until later, when upon its retreat down the sun's western limb, it is again apparently retarded.

Astronomers agree that a sun spot, whatever else it may be, is a depression in the sun's surface. The great spot of December, 1819, when rounding the sun's limb, was seen as a very noticeable notch in the sun's disk. Spots vary greatly in size, ranging from insignificant specks a few hundred miles across to their formidable brethren of thirty to sixty thousand miles in diameter. Groups of spots sometimes coalesce, forming a common penumbra embracing a giant tract fully a hundred and forty thousand miles from brink to brink.

These phenomena, happily, are of fleeting existence, six weeks' time being a ripe age for the most persistent spot. This period, we may add, is by no means decisive, spots having been observed to cross the sun's disk six to eight times, each

crossing representing a complete journey around the sun's sphere, a circle requiring a period of about twenty-seven days.

In astronomical language a sun spot consists of two parts, an umbra and a penumbra. The umbra is the black central part, the penumbra the more luminous striated zone surrounding the umbra and connecting it with the outer fiery surface of the sun. Photographed the spot resembles a jagged bullet hole in the sun's surface—an inky hole circled by a gray streaky band. Photometric results demonstrate that the black hole or umbra is only comparatively dark ; in reality it is more intensely brilliant than a calcium light.

Opinions as to what a sun spot really is vary as there are astronomers to advance them. In any of several current theories may lie the real character of these huge saucer-shaped cavities. I enumerate five :—

(1) Eruptions or explosions on the sun's surface, of which the spot is the visible "crater."

(2) Hollows or valleys in the photosphere into which cooler and darker gases or vapors collect.

(3) Punctures caused by solid foreign bodies passing into the sun's mass.

(4) Comparatively dark inner stratum of the sun seen through the attenuated regions of the outer luminous surface.

(5) Irregularities in a "cloudy stratum" supposed to lie between an inner denser surface and the outer visible disk.

These reasons generally have as a basis a presupposed idea of the nature of the sun itself. Says the astronomer, "The sun is a hot, self-luminous globe." What makes it hot? What makes it luminous? Why does it retain its heat and luminosity without perceptible change or waste?

Let us treat momentarily on the sun. Five current theories account for its heat and light. They are :—

(1) Conflagration.

(2) Shrinkage.

(3) Molten mass.

(4) Falling bodies.

(5) Electricity.

The first argues an interminable supply of oxygen, which



alone is fatal to its plausibility were it not that the inconceivable volumes of smoke or other residue would certainly darken all space about the sun.

In the second a diminution of diameter sufficient to produce the unceasing stupendous heat of the sun has not been detected by the most painstaking calculations.

Reason third falls on the fact that molten masses cool first from the outer surface inward. No molten mass, however large, surrounded by space wherein absolute zero reigns supreme, can retain its initial brilliancy for almost imponderable periods of time.

The fourth theory lacks in mechanical accuracy. The sun's heat is equal to the task of dissipating a solid cylinder of ice forty-four miles in diameter and one hundred and eighty-six thousand miles in length each second of time. Whence, then, comes the immeasurable supply of foreign matter which must impact each moment upon the sun's surface to produce this heat? It is not daring to state that such an amount of material surrounding the sun must effectually block its rays from the solar system.

At the last reason we may pause. Electric fluid, so far as we know it, possesses the qualities of producing heat and light without appreciable waste or loss. Can we reconcile it to the phenomena of the sun? Try figures.

The diameter of the earth in round numbers is 8,000 miles, that of the sun, 882,000 miles. Considering the earth's bulk (*i. e.*, size) as 1, that of the sun is 1,380,000. In mass, or total constituent matter, the sun exceeds the earth only 332,000 times.

With mass so small as compared with bulk the sun's density must be insignificant as measured by the earth's density. In reality, it is about a quarter as dense as the earth. Now, as the earth is five and one half times as dense as water, it follows that the sun, considered as a whole, must be only about one and a half times the density of water.

Having ascertained these facts, various claimants state that the sun must be merely a huge ball of enormously high-temperated cloud, gas or vapor, and as such, being necessarily in constant and violent ebullition, the sun spot is simply the burst-

ing bubble which pushes to the surface, the inconceivable contents of which retains its being until overwhelmed by the tremendous heat surrounding it.

But the sun totals heavier than an equal mass of water, and gas, vapor or cloud are commonly presumed to fall far short of water in weight or density.

From observations of the corona during eclipses, and studies of the rose-colored projections frequently observed (notably on July 7, 1842), it is agreed among eminent astronomers that the visible surface of the sun consists of matter of the most excessive tenuity. How deep lies this attenuated layer of gas, cloud or vapor it is impracticable to hazard, but it gives firm ground to the belief that the sun becomes rapidly more compact as the central portions are approached.

From this we predicate that the inner sun is cooler than its blazing exterior, else it, too, would be of similar tenuity, and the solid rock of the specific gravity theory be wafted away on the wings of air.

Assume the gaseous outer layer to be 300,000 miles in thickness, swathing a dense, comparatively cool, nucleus 282,000 miles in diameter. What, now, furnishes the superlative heat and light given off by the outer layer? Is it due to an original heat still seething through its ethereal regions? Does friction cause it?

Think of a slab of honeycombed ice. Imagine the vertical fibrous "pencils" to be streams of electric fluid 300,000 miles in length. Imagine the tiny white bubble at the top of the pencils a hot, sizzling arc-lamp end of an electric current hundreds of miles in diameter. Imagine the whole vast layer close woven with electric streams moved to and fro in waves or undulations.

Is it not possible that the rapid and constant discharge of this stupendous electric store creates the magnificent sheet of light that throws down to Mother Earth her sunshine? Would not the unlimited heat generated possess the energy that reaches us as grateful warmth?

And then, would not a slanting view of these giant electric flashes, due to a chance funneling of the undulatory currents,

present to us a penumbra? and the umbra be a momentary glimpse or reflection of the sun's real mass?

Consider that in looking at the sun we see in reality the outer ends of countless millions of powerful electric discharges, flashing toward us from some hidden stratum of the sun's interior. The sun spot, then, a well, walled by dazzling steepes as ethereal as vacuity itself, bursts into view, holds its short sway and presently is swallowed up in the glowing surface of the sun, a mere interloper in the scheme of heat and light.

### *Song-Sparrow*

(Seen and heard singing in a snow storm, March 3, 1904.)

Hie away! Hie away!  
Burly Winter, grim and gray!  
Coy Spring  
Now doth bring  
Her sweet roundelay.

On the alder by the wall,  
Sweetest songster of them all  
Now outfling  
Notes that ring  
Nature's matin call!

Snowflakes cannot quench thy song,  
Sweetness triumphs over wrong;  
On my way  
Blithe and gay,  
Cheered, I pass along.

F. H. PALMER.

## *The Nature-Study Movement*

WALTER E. RANGER, SUPERINTENDENT OF EDUCATION OF THE STATE OF  
VERMONT, MONTPELIER.



NATURE-STUDY is the inevitable issue of a larger movement in education, embracing progressive educational thought and practice since the time of Comenius, and supplying the essential elements of the so-called new education, which, among other important and distinctive characteristics, holds education to be a process of life-growth rather than that of molding or manufacture, and a method of natural training rather than a means of formal information, and which makes its aims practical and ethical as well as intellectual. It involves the historic reaction from authority to freedom; from a belief in the innate depravity of childhood to a sacred regard for the spontaneous life of the child; from harsh and tyrannical to humane and sympathetic treatment of children, and from repression as a practice in teaching to expression or free self-activity as a natural law of education. It consequently places the child and his development above subject-matter, method and appliances in all rational teaching, and realizes that he is to attain development according to natural laws by his own activity and the influences of his environment.

School education, governed too much by tradition and animated too little by the real industrial and social life of the people, is inclined to be concerned rather with traditional subject-matter than with the life of the child and its needs. It too often tends to take the child out from his true and natural environment and to create about him an artificial world of unreal forms, unintelligible facts and arbitrary laws, which seem to have little relation to his own real and onrushing life. To the child the life of school, of home, of play, of work, and of God's out of doors should be one and harmonious. Nature-study tends to correct an error of traditional school education by opening, in response to the needs of the child, the door of the school-room to the truth and beauty of Nature, the child's dear

companion and teacher. Even in school it keeps him in contact, and places him in more intimate relations, with the objects and events with which he lives. It restores the pupil to a true relation and sympathy with his own life, and brings the school into harmony with other educative influences. It sets forth the ideal revealed in Whittier's kinsman:—

“Himself to Nature's heart so near,  
That all the voices in his ear  
Of beast or bird had meaning clear.”

The coming citizen should be trained to think the thought of his time, to grasp living problems and to be resourceful in the common circumstances of his life. The life of nature and of man constitute the actual and proper environment of the child, and are the natural, obvious and potent means and influences for his education in school and everywhere. Nature-study means that the real life of man and nature are to permeate, energize and enrich the life of the school. Such must be school education if it is to be “the adaptation of a self-conscious being to environment” and the development of capacity to control that environment; in other words, if it is to help the pupil in finding his place and in living his life well.

Nature-study is not a new subject to be added to the daily program, not a “study” calling for more work, not a lesson to be prepared for recitation. It is to enrich all school subjects, to rectify their treatment and to vitalize all school work. It has to do fundamentally with the spirit, aims and practice of all elementary school education. It is even a principle of education to govern practice. It is not “science,” not botany, biology, or mineralogy, not even elementary science. The capacity of young children prevents the careful analysis and systematic treatment of subjects known to scientific method. Nature-study follows the natural order. What the child touches, sees, hears, becomes the object of his interest and attention. It follows that no set course of study can become mandatory. Outline courses are valuable, but chiefly on account of their suggestions, helpful guidance and inspiration. The wise teacher will learn from the child and his surroundings what to teach and how to teach him.

The aim of nature-study, as an educational process, is to put

the child in sympathy with his surroundings—with his own life. Its end is to educate him by means of the subjects within his own sphere. It seeks to quicken his sympathetic interest in the things about him, and thereby to energize his self-activity, through which his life is to be enlarged, enriched and vitalized. Its immediate value is to broaden knowledge, to cultivate interest in nature and man, to develop power of observation, to develop the power to compare, discriminate, judge, to train the power of expression and to make one resourceful. An incidental value of nature-study is to inspire an appreciation of rural surroundings, to give contentment to country life, and to make farming a happier, more attractive, and more valuable calling. Nature-study contributes much to right civic and moral training. It inspires kindness to God's creatures, gentle manners and a fine regard for the rights and well-being of others. It gives a larger love of home and familiar scenes and a deep interest in men and things, which are at the heart of good citizenship. In brief, it tends to "adapt the child to his threefold environment, nature, man, God."

The constant and significant cry of Comenius, "Study nature," re-echoed again and again by the world's eminent educators, meant more than to gain a knowledge of natural objects. It means intimacy, communion, sympathy with the creative life that throbs through nature's myriad beings. The study of Nature should lead one to a realization of her mighty forces in which man finds or loses his life, bring him to a recognition of universal law that has governed from the beginning, and inspire him to conduct his own life in sympathetic relation with the creative and infinite spirit in which he has his being.

If this view of the nature-study movement be true, nature-study is the natural and inevitable product of real educational progress, and not that of professional faddishness or exploitation. As it finds expression in conscious organized effort, there is greater hope that our children may learn to "consider the lilies of the field," to understand the speech that "day unto day uttereth" and the knowledge that "night unto night showeth," and to realize the old saying, "Truth shall spring out of the earth, and righteousness shall look down from heaven."

*Editorial*

THE meeting of the Superintendents Department, N. E. A., at Atlanta, Georgia, was a genuine love feast; balmy air, comfortable quarters, genial hospitality, all combined to make the meeting memorable though not famous. The program was a family one in that the papers were almost entirely from the ranks. The subjects were family subjects of direct interest to the work in hand. They were dealt with in a direct, practical way. There were no startling utterances; there was no talking for effect; but there was a deal of sound sense, notably in the papers of Superintendent Maxwell of New York and Dr. Frank McMurry. The main thread running through all the utterances was the practical betterment of the school system with the teacher as the centre. Perhaps the most notable thing was the fact that self-glorification was entirely absent, and that the child and the teacher received constant undivided attention.

THE discussion at the meeting was not vigorous in that there was too general agreement with the trend of the speakers. The liveliest period was over the reformed spelling, which resulted in the decisive victory for the reformers. It is easy to form a committee and to investigate and spend money—other people's—but it is not so easy to make the public adopt the committee's conclusions. It is a long struggle to get even a single word changed; as witness the time it has taken to get people to adopt "program" as correct spelling. Ten thousand dollars from the N. E. A. treasury, plus an equal \$10,000 raised from outside, to be spent by a committee of thirty "eminent scholars," with five years to spend it in, will accomplish—what? Will "thru" be received by the general people, and if it is, is it worth \$20,000? Here is a problem in arithmetic which may be worked by the old "rule of three." If thirty men working five years at a cost of \$20,000 can remove three letters from a cumbersome English word, how long will it take to revise the Chinese alphabet?

IN the last number of EDUCATION, we devoted an editorial paragraph to the subject of love as one of the fundamentals underlying true home life. We have in mind in these paragraphs that phase of family life which has to do with the relations of parents to children. Next, in importance to love, which creates and sweetens the atmosphere of home, stands AUTHORITY. If love makes the sweetness, authority makes the strength of true family life. Love without a wise firmness which

sets standards of conduct and requires obedience, degenerates rapidly into mere indulgence. The children of such homes are spoken of as "spoiled" children. They are allowed to have their own way and quickly learn to demand it, in utter disregard of others, and of their own real interests. Nothing undermines character faster than such lawlessness. Selfishness is one of the most abhorred of vices. In the true home it is eradicated by the exercise of a wise parental authority. The child acquires self-command by learning to obey. He finds his own personality limited by other personalities in the home circle, and discovers that his own desires cannot ride rough-shod over those of other people. Thus he is trained and civilized and made teachable and agreeable. Now as we showed in the case of love, the exercise of this quality of authority must be begun very early in the child's life. An imperious little will often asserts itself in a newly born infant, and even before his mother fairly gets him it not seldom happens that an indulgent or careless nurse gives him his way for a mere cry, to the working of almost ineradicable mischief in his character and with the result of days and nights of trouble for his parents.

Many a fond mother's and father's authority is overthrown by an over-tender or nervous dread on their own part of a natural, harmless, healthy infantile cry. Rather than hear that cry for a few minutes (though it is but nature's provision for promoting circulation and developing vital organs) the over-wrought, nervous parent abdicates the throne of authority and gives the babe absolutely his own way. Here is the very starting point of a host of after troubles that hurt the home and disturb the schoolroom. We do not believe in the idea of "breaking" the child's will. But it should be trained to give up when having its own way is not best for it or others; and this training should begin at the very hour of birth, for that is when the will begins to assert itself.

All along through infancy, childhood and youth a child should know the wholesome influence of a firm, wise, loving authority limiting its choices, directing its energies, and preparing it for citizenship. A home which does not furnish this is fundamentally defective. A father and a mother should each know how to say No! in a way that leaves no room for appeal. Go! should mean *go*—and not *dally*. Stop! should mean stop now, and not by and by when someone is good and ready. Authority's "yea should be yea, and its nay, nay." Not arbitrarily! Not impulsively! Least of all, angrily! But with well-considered, self-controlled decision and firmness! The children of such homes will have the stuff in them that manhood is made of. They will do good work for human-

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ity. Their virtues will not wait to shine out in their maturity, but they will adorn the home, and cheer and brighten the schoolroom. This is how the home may help the school. Send the children to the schoolhouse trained to obey, ready to give up for others' sake, thoughtful of something besides their own pleasure for the moment, having an ingrained respect for their superiors and for law and authority. These are good, old-fashioned virtues, which are sometimes conspicuous by their absence in the young people of to-day. They are fundamental to a true home life; and equally so to all other human organizations, and to the highest welfare of the race itself.

**I**MPORTANT among school code matters at the present time are the movements in Ohio and the recent enactments by the legislature of New York. In Ohio there had grown up through the years a mass of special legislation upon schools as upon other interests; all of which by recent State Supreme Court decisions has been declared unconstitutional. Cleveland, Cincinnati, Columbus, Toledo, and certain other cities, had their special school charters. In the assembly now in session at Columbus, an effort is being made to enact a uniform code for the State that shall bring the several cities into a common system. Cleveland and Toledo each have now the school commission, constituted of a small number of members elected at large. In Cincinnati and the southern part of the State generally the large board prevails, whose members are elected in the traditional way by wards. The contest between the two systems is on, and the political forces of the whole State are being lined up on the question. The outcome is doubtful, but because it is a matter of interest to school men generally the result will doubtless be noted in these columns.

**I**N New York state certain changes have been made that promise far-reaching consequences. Of all the states New York is known to have the most centralized school system. Heretofore it has included briefly a Board of Regents of the University of the State of New York, composed of eleven members, representing no teaching institution, but being solely an examining body; and the State Department at Albany headed by the State Superintendent of Public Instruction, with his assistants. The Regents have had charge, by law, of the colleges, universities, and professional schools; and the State Superintendent of the elementary and high schools, and a certain control over the normal schools. Actually, however, through the distribution of a considerable fund in aid of high schools, and by a system of college entrance examinations, the Regents have for many years practically

controlled the high school instruction also. Except in Greater New York, Rochester, and perhaps a few other cities which surrendered the financial aid and organized their schools independently, the city high schools generally have been fitting schools chiefly, in form and management, rather than finishing schools. Every energy was bent to passing the Regents' examinations.

**B**Y the new law there has been a consolidation of the two parts of the system. The eleven Regents, heretofore holding for life, are now to be elected by the State Legislature, each for a term of eleven years, and are to have general charge of the higher and professional institutions as heretofore. Instead of a separate executive officer, the newly constituted State School Commissioner is to be the executive officer for both classes of institutions—the lower and higher—and is to hold his office for six years. For the first term Judge A. S. Draper (formerly State Superintendent of New York, and recently President of the University of Illinois) has been elected to this position by the State Legislature. Hereafter he is to hold his office at the pleasure of the Board of Regents. School interests of this section will welcome Dr. Draper back to the East, and feel sure that Empire State school interests will be wisely administered during his incumbency.

**T**HE new law gives rise to certain observations that should be noted. It still further centralizes the school administration for the State. It increases the danger of political control of the entire system through the selection, directly or indirectly, of all controlling officers by the State Legislature. It practically perpetuates the system of Regents' examinations and the payment to high schools (partially at least) by results. It simplifies the control, however, and is expected to check the further friction between the educational forces of the State that has characterized their relations for years. Through Dr. Draper, at least, the law will have a trial at its best. The new Commissioner takes his office April 1, 1904.

**S**INCE commenting briefly last month on the recently emphasized demand for the centralization of authority in school affairs in the hands of experts, we have read Professor Hanus' excellent new book, "A Modern School." In the chapter on "Obstacles to Educational Progress" he speaks emphatically on the above subject. He says that "The chief obstacles in the way of better organization and administration of our city school systems are the failure of the public to recognize the educational expert as such and the corresponding unwillingness to trust him when found." Elsewhere in the book it is suggested that

when he speaks, the dictum of the educational expert should be "as little questioned as that of the physician, lawyer or engineer. Lay interference is not to be tolerated," etc. Now, while this possibly represents an ideal toward which the educational affairs of the race are gradually tending, we are of the opinion that the goal is yet a long way off. Meanwhile certain practical facts must be faced, such as the following: 1. There is not yet formulated an exact body of educational doctrine (as Professor Hanus himself points out) upon which the experts who are not to be interfered with are agreed as a basis of action. 2. In many cases the one who passes for an expert, and whose judgment is not to be questioned by his "lay" constituency, makes glaring mistakes, and is often fairly open to the suspicion of being an experimenter or a promoter of fads. 3. Even the expert lawyer or doctor is subject to the final judgment of his lay brethren, and is sometimes dismissed for incompetency. This is, on the whole, a wholesome state of things; on the one hand a safeguard, and on the other a stimulus to professional faithfulness and progress. 4. The delegation or relegation of all educational authority to experts would undoubtedly result in a distinct loss of popular interest in educational affairs, which would shortly react most unfavorably on the schools, and defeat the very objects for which the educational experts are working. Finally, Professor Hanus himself admits that the great reason why "the wisdom of following the professional leadership is not realized" is "the unfortunate lack of a genuine professional knowledge and a well-considered administrative policy on the part of many superintendents. . . In other words, the teaching profession cannot expect recognition for professional knowledge and skill until its members take pains to possess it." This reminds us of the story of the lawyer who told the judge that there were thirteen reasons why his client was not present in court that morning, the first one being that he was dead. The judge excused him from enumerating the other twelve. We think a good school board, knowing local conditions and traditions and composed of public-spirited, practical, earnest men, co-operating with a well-endowed and thoroughly trained "expert" superintendent, is about as good a working team for the management of school affairs as we shall need or be able to devise for some hundreds of years yet. And this notwithstanding the fact that politics does sometimes get into city school boards to their everlasting shame and disgrace.

### *Foreign Notes*

#### WOMEN IN THE UNIVERSITIES OF CONTINENTAL EUROPE

The movement for admitting women to university privileges is progressing slowly but surely in the chief countries of Europe. Theoretically, the universities of France have long been opened to women, but no use was made of the privilege prior to 1866, when Mlle. Brès applied to M. Wurtz, the rector of the Paris University, for admission to the medical faculty. She was met with the statement that she must first secure the two diplomas, bachelor of letters and bachelor of sciences. Meanwhile her application was referred to the Council of Ministers. On the day of the hearing, the Emperor being absent, Empress Eugénie presided, and through her intervention the Cabinet voted in favor of the application. While Mlle. Brès was working for the preliminary diplomas, two foreigners, Miss Garret and Miss Putnam, were admitted to the medical faculty. The former, who had been denied admission to the Edinburgh faculty and to the medical college of London, was the first woman to secure the doctor's degree from the Paris faculty. Two years after the daring effort of Mlle. Brès, four women were enrolled; in 1878, the number was thirty-two; in 1886, one hundred and nineteen; in 1898 it had reached four hundred and sixty-six. At present women are enrolled in nearly all the universities of France, and last year witnessed a total attendance of 1,339 women students.

The Dean of the Paris faculty of letters, M. Alfred Croiset, writes with respect to the presence of women: "In my opinion, experience shows only advantages from the association. The presence of scholarly women in our class rooms increases the serious efforts of the young men, whose attitude in this matter leaves nothing to be desired."

In Italy women have enjoyed university privileges since 1890, and in Belgium since 1875. The University of Copenhagen has enrolled three hundred women since their first admission in 1877, and the rector, Dr. A. Hoeffding, declares that they have been among the best students, and that the tone of the University has been raised by their presence. The four universities of Holland show an increasing attendance of women, the numbers registered in 1902 being as follows: at Leyden, 72 women in a total of 870 students; at Utrecht, 48 women in a total of 1,878; at Groningen, where the department of modern languages is specially strong, 36 in a total of 440; at Amsterdam, 69 women in a total of 900.

Professor Hammerstan, who has had abundant opportunity for observing the effects of co-education in the universities of Sweden and

Norway is heartily in favor of the policy. The men and women students, he says, exercise an admirable influence over each other, and the women do excellent work. There seems indeed to be a surprising agreement as to the good effect of co-education among university professors in Europe who have had experience in the policy. Out of a total of thirty-six professors representing twelve countries of Europe, whose opinions on the subject have recently been sought, all but three pronounced decidedly in favor of the policy. The exceptions noted are simply undecided.

The University of Munich is one of the latest in Germany to open its doors to women. In a report on this action, United States Consul General Worman says: "Hitherto no women were permitted to matriculate in the German universities," adding: "In several of them women have been permitted to attend lectures and have been allowed to take their degrees on examination by and with the consent of the faculties concerned." For the present the University of Munich limits its admission of women by regular matriculation to such as possess the abituria of the German gymnasium, and they are admitted to this noted German high school only upon the same conditions as its male students. Lady students of foreign birth, graduates of colleges, but who do not possess the German gymnasial abituria, are only admitted as hearers, and they may with the consent of the faculty pursue a course of study and finally come up for a degree, but they have not yet been conceded the same rights that are accorded to that class of German female students having the gymnasial abituria."

Next year will be the tenth anniversary of the admission of women to lectures in Berlin University. Of ten women who during that time have earned a doctor's degree from that famous foundation, five are Americans. One of these, Miss Milroy, secured the degree *summa cum laude* for her remarkable achievement in chemistry.

#### WOMEN IN THE ENGLISH UNIVERSITIES

Special lectures for women were started in connection with the University of Cambridge in 1870. Girton College was incorporated at Cambridge in 1873, though it had been in existence at Hitchin since 1869. Women were first informally admitted to the "previous examination" in 1870, and to the tripos or final examination in 1872.

In order to be permitted to take the tripos examinations women must reside at Girton or Newnham, and admission to these colleges is only granted to students who have passed the previous or some other recognized examination. A class list of female students is published after the examinations along with the list of members of the university ;

the method of management is the same in both cases, and certificates are given to women stating the class or place in class attained in each examination.

At Oxford, lectures and classes were started for women in 1873, and examinations were instituted for them two years later. An association for encouraging the education of women was formed in 1878, and is still in active existence. Through the secretary of the association, women are admitted to nearly all the lectures given in Oxford, and the council of the association registers all women students. These students are either in residence at Somerville College (founded 1879) Lady Margaret Hall (1879), St. Hugh's Hall (1886), St. Hilda's Hall (1893), or belong to the Society of Home Students, comprising students who reside in private families and are supervised by the council of the association. In 1884, honor, moderations and final honor schools of mathematics, natural science, and modern history were opened to women, and from time to time admission to the examinations of other schools was granted, but it was not until 1894 that they were free to present themselves for examination in all the subjects in which men may take the B.A. degree. Women are not eligible for degrees. An important difference between Oxford and Cambridge is that at the former university women are admitted to the pass as well as to the honor schools, and for either examination an outside student is equally eligible with those who have studied and resided at Oxford.

As regards the extent to which women avail themselves of the facilities offered by the Universities of Cambridge and Oxford for their higher education, it may be said that during the session 1901-1902, Girton and Newnham together had 292 students, while in 1902 there were at Oxford 228 registered women students. The whole number of women students who took honors in the various triposes at Cambridge from 1881, the year in which they were opened to women, to 1900 was 1,036, and of these 180 took honors in natural science, the number in mathematics being 250 and in classics 227.

The University of London, which received its first charter in 1836, was the first English university to recognize the claims of women. In 1867 the University was granted a supplementary charter, under which it was enabled to offer certain special certificates to women. In 1880, women were admitted to all the degrees, honors, and prizes which were at the disposal of the University, and in 1882 women graduates were admitted as members of convocation.

The University of Durham, by a supplementary charter granted in 1895, opened all its degrees except those in theology to women. Women are admitted to university lectures on the same conditions as men, but to qualify for the degrees they must reside at Durham in the women's hostel provided by the University.

A. T. S.

## *Book Notices*

NOTE.—The number of books now published monthly is so large that we shall hereafter adopt the plan of promptly acknowledging by title, author, publisher and price, all books sent us for review; and later, as space is available, give more extended notice to such as seem most likely to be of interest and value to our readers.—PUBLISHERS EDUCATION.

**The Russian Advance.** By Albert J. Beveridge. Harper & Brothers, New York. What is the Russian advance? What does it imply of national or racial ambition and purpose; of assistance or hindrance to the development of other nations and races, contiguous or remote? These are questions which force themselves on every thoughtful observer. Any complete answer is doubtless impossible. Race consciousness is scarcely susceptible of accurate definition. Nations reach out after much that is vague, even in their most practical ambitions. This book by Senator Beveridge is by far the best exposition of the elements that must make up the answer that has been given to the public. He has given himself to the study of the actual situation with open-mindedness, has formed his judgments very impartially, and recorded the results with a clearness peculiarly American. Naturally the subject is looked at especially from the standpoint of Eastern Asia, and the relations of America to its commerce and trade. Yet there is much that explains the general policy of the empire elsewhere, and the reasons that make every move of the Slav of vital interest to the Anglo-Saxon, Teuton and Latin. While not a scientific book it accomplishes much for the general reader which no scientific book could. Especially is this true of such chapters as those on "Russian National Ideals" and "Three Russians of World Fame." Any reader of those chapters will gain a clearer conception of the true character of the Slavic ambition than is presented in any other book. There is also a great deal of valuable information in regard to the labor laws of Russia, the Greek Church, the condition of the peasantry, the manufacturing interests, but the greater part is taken up with the situation in Siberia, Manchuria and Korea, particularly in its effect upon American interests in Eastern Asia. Very wisely the author does not make very prominent his opinions as to the right course to take in dealing with this Russian advance. The impression the book leaves is that the dread of the Russophile is as ill-founded as the exaggerated praise of the Russophile. In any case the situation is one that is not yet entirely clear, but must be watched carefully, that legitimate interests may be safeguarded, and possible dangers avoided. In all this he believes in the sympathetic rather than the antagonistic method. Russia is a power that must be reckoned with, and one which will in all probability grow rather than lessen. To gain the most from her she must be looked at as friend rather than foe. To some he may appear an apologist for a system entirely foreign to American ideals, yet not even George Kennan has set forth the real divergence more clearly. His aim is to describe what is, and then leave the reader to form his own conclusions as to how to act in relation to that situation. The war with Japan he looks upon as almost, if not quite inevitable, and his judgment as to the outcome is fairly well borne out by the results, though he credits the Russian navy with more effectiveness than has been apparent. The book is well provided with appendices, giving the different treaties, etc., and with maps, and is gotten up in good style. The one drawback is the running

title, "Russian Advance," whose constant iteration becomes rather wearisome and confusing. The next edition—and it is to be assumed that there will be many of so valuable a book—may well remedy this slight defect.

**American History for High Schools and Highest Grammar Grades.** By Supt. William E. Chancellor, of Bloomfield, N. J. Published by the Morse Company. The book is superbly illustrated and is printed in large type upon excellent paper. In its treatment of American history, the work is entirely different from any other text, as the striking table of contents at once shows. There are many pedagogical helps all through the text. The literary quality of the book is very fine. Altogether, this American History appeals at once to the teacher of the subject as the work of a scholar and expert teacher, and a man of letters. It is a definite contribution to historical teaching in our schools and is certain to become speedily a leading text-book. It breathes a spirit of patriotism and of humanitarianism from the first page with its striking quotation from the writings of George Washington to the last pages with their summary of the progress of American civilization. The author is now engaged upon the preparation of a ten volume History of the United States, to be published by the old and famous Putnam house, a signal confirmation of his reputation as one of the ablest historical scholars in the country. It is safe to say that this text-book will add to his reputation by becoming widely used in the schools for which it has been prepared so skillfully.

**The Red-Keggers.** By Eugene Thwing. Mr. Thwing has made a notable and original contribution to the not over large list of books of fiction portraying in a worthy way that which is distinctly American in our national life. He has found in the great lumber districts of Michigan and in the unique, strong, simple lives of the lumbermen a field for his literary imagination which readily supplies all the needed elements for a stirring and dramatic story. Such a community is a little world in itself where we may observe the play of all human emotions and passions. Mr. Thwing's characters, of which there are a great variety, are natural, human, interesting. There is perhaps a little overplus of dramatic incident. Any of the events described might readily enough happen; but so many startling experiences would hardly bunch up in so small an amount of space and time. Undoubtedly there is a demand for exciting incident in the fiction of the day. But it must not be overdone. It is a common fault of young writers to make too great a concession to well-known popular demands. Better so, however, than to write dull books. Certainly there is not a dull chapter nor even page in *The Red-Keggers*. The reader's attention is caught at the outset,—indeed by the very title, which is itself a stroke of genius; and the interest increases to the very end. Yet an experienced novelist would have made at least two good books out of the plot and incidents in this one. The story, however, is not merely an interesting and exciting one; it is a serious study of human motives and has an earnest purpose which is not obtrusive but delicately and suggestively pervasive. This purpose is to show the evil of sin and weakness, and to make the reader love and achieve strength, beauty, and manliness of soul. The two characters which stand out most prominently in the story are Jim Gyde, who, though in every sense a "tough" at first, had nevertheless the germ of a noble life in him, the story of the development of which is touchingly told and which made of him finally a "hero" of first rank. The contrast between Jim Gyde's evolution and Sam Hawkins' degeneracy is an artistic piece of literary



work. Sam is himself a most interesting study and much of the criticism of this book has fastened itself upon him, insisting that he should not have been let off so easily from the consequences of his heinous crimes. But we think we discern the author's purpose in the delineation of his character and we believe that it is psychologically correct. In his soul there was implanted by Minister Allen (who by the way is one of the best creations of the story) a germ of spiritual life which resulted in an awful conflict of good with evil impulses. Having already distinctly committed himself to certain evil pursuits in which he was involved with other evil-minded companions, he found himself under such stress to do evil that he plunged headlong into it from the very necessity of silencing and quenching the higher voice that bid him turn into the path of right. A strong man would have mastered the evil by will power. But he was a weak man. Something external must break the chains which bound him to evil companions and practices. When this happened he confessed all and turned about and began a better life. The primitive customs of frontier justice gave him the respite during which he could demonstrate the sincerity of his reformation. If the chief object of punishment is to reform the evil-doer, why should he be punished after the reformation has been demonstrated? Pardoned, officially, and surrounded at last by good influences, emanating from true and loving friends, Sam Hawkins too finally became a hero. The women of this story are sweet and lovable. The book as a whole makes one admire strength and virtue and hate weakness and sin. The Booklover Press. Price, \$1.50.

**The Relations Between Freedom and Responsibility in the Evolution of Democratic Government.** By Arthur Twining Hadley, President of Yale University. In his able and scholarly style, President Hadley analyzes the condition of peoples as to freedom and responsibility, beginning with tribal customs and ending with the civilization of to-day in our own country. The argument leads naturally and finally to the consideration of both competition and combination in business. In the course of this, he says: "Taking business as we find it, and human intelligence as we find it, we need some new standards of business morals in order to prevent industrial monopoly from degenerating into industrial conspiracy," and his final conclusion is just what this expresses. The work is a careful and clear analysis up to a certain point; but on account of one singular omission it is incomplete and its conclusion not founded on the firm logic which such a conclusion deserves. The omission is that of the consideration of the effect upon competition of the special privileges which all trusts have been able to monopolize, and whether this enormous factor gives them any portion of their great power. The book, therefore, needs another chapter to complete it, and to bring out into clearer light what kind of business morals the new standards will require. Charles Scribner's Sons, New York.

**The Modern School.** By Prof. Paul H. Hanus, Harvard University. Professor Hanus is well known as one of the able thinkers and real leaders of the educational world. The volume which he here presents is composed of essays which have appeared from time to time as addresses or contributions to the periodical press. Each is distinct and complete in itself, and yet when brought together in a single volume as here, the several chapters are seen to possess relations to one another and to be bound together in a unity which is imparted to them by the mind of the author thinking along the line of the evolution of the

educational life of the race. He considers such subjects as *A Modern School*, (from which chapter he takes his title); *The Academy and the Public High School*; *Two Contemporary Problems in Education*; *A Six Year High School Program*; *The School and the Home*; *Our Faith in Education*; *Obstacles to Educational Progress*; *Education as a Universal Study*; and *Graduate Testimony on the Elective System*. These are subjects upon which all students of education will wish to know the opinions of this "Master in Israel." The volume is a most able and suggestive one. For a further discussion of a single point made in one of the chapters we refer the reader to one of the editorial paragraphs in this number of this magazine. The Macmillan Company.

**Present College Questions.** Six papers read before the National Educational Association, at the session held in Boston, July 6 and 7, 1903, by Presidents Eliot, Harper, and Butler, of Harvard, Chicago University, and Columbia University, respectively, and Dean West of the Graduate School, Princeton University.

Although dealing with college problems, these papers are full of inspiring thought, as the words of the true educator always are. President Eliot gives "A New Definition of the Cultivated Man" in the liberal terms of a broad mind. "The best fruits of real culture," he says, "are an open mind, broad sympathies, and respect for all the diverse achievements of the human intellect at whatever stage of development they may actually be." Dean West sees "The Present Peril to Liberal Education" in the growing commercialism and its companion, ignorance of what the best literature offers, and in college in the confusion as to the aim to be achieved. The four papers on the length of the college course, one by each of the four speakers, are full of interest. The volume will be inspiring to every educator who reads it, from the college president to the kindergartner.

**Fundamentals of Child Study.** By Edwin A. Kirkpatrick, B.S., M.Ph. Macmillan Company, 66 Fifth Avenue, New York. Price, \$1.25. This "Discussion of instincts and other factors in Human Development" is a study of the child growth in its various phases and stages, in an exceedingly pleasant style adapted to the general reader. In its treatment of these it allows the full value of the natural instincts and shows how the child may be led to develop from them the higher ones. The chapter on Sex points out the wholesome protection which should be given to both boys and girls in this most sacred instinct, involving the careful instruction they should receive about them from the father and mother. The sections on "The Development of Individualistic Instincts," "Heredity," "Individuality," "Abnormalities" and others, are full of wisdom stated and suggested. Any man or woman, whether father, mother, teacher, or only a member of the social body generally, who has an intelligent interest in human nature, will find here most valuable information, most valuable suggestion, and be the wiser and better individual of society for having mastered its thought.

**Linna von Barnhelm.** Edited by Charles Bundy Wilson. The introduction is a most critical study of the play and its historical background; the notes are comprehensive, and a complete vocabulary makes the study of the play a comfortable matter. A full dozen illustrations embellish the text. D. Appleton & Co.

We have received the following books for review in EDUCATION:—

*D. C. Heath & Co.*: Eastward Hoe and The Alchemist. The Good Natur'd Man and She Stoops to Conquer. The Belle Lettres Series: General Editor, George Pierce Baker, A.B.: Modern Language Series: Feuillet's Jeune Homme Pauvre. Edited with introduction, notes and vocabulary, by James D. Bruner, Ph.D.

*A. S. Barnes & Co.*: Napoleon, A Short Biography. By R. M. Johnston. The Citizen, A Study of the Individual and the Government. By Nathaniel Southgate Shaler. Running The River. By George Cary Eggleston.

*Houghton, Mifflin & Co.*: With the Birds in Maine. By Olive Thorne Miller. Price, \$1.10 net. Riverside Literature Series: No. 157, The Song of Roland. Translated into English Prose by Isabel Butler. The Book of Merlin, The Book of Sir Balin, from Malory's King Arthur, with Caxton's Preface. Edited with an Introductory Sketch and Glossary by Clarence Griffin Child. No. 158.

*Funk & Wagnalls Co.*: Standard Reader Series: Standard Second Reader. Edited by Isaac K. Funk, LL.D., and Montrose J. Moses, B.S. Teachers' Manual for Second Reader.

*The Macmillan Company*: The Philosophy of Education. By Herman Harrell Horne, Ph. D.

*T. Y. Crowell & Co.*: Minute Marvels of Nature. By John J. Ward. Price, \$1.60, net. Postage, 15 cents.

*The Morse Company*: A Text-Book of American History. By William E. Chancellor.

*University Publishing Company*: Standard Literature Series. Stories and Poems by Edgar Allan Poe. With an introduction and notes by Edward Everett Hale, Jr., Ph. D.

*Paul Elder & Co.*: Psychological Year Book. Quotations for every day in the year. Gathered by Janet Young. Price, 50 cents, net.

*The John M. Rogers Press*: Annual Report of the Public Schools of the City of Wilmington.

*Fredericks-Glunz Printing Company*: Thirty-Second Annual Report of the Board of Education of the Kansas City Public Schools.

*Government Printing Office*: Twentieth Annual Report of the Bureau of American Ethnology. By J. W. Powell.

### Periodical Notes

"Protozoa and Disease" is the title of a useful and interesting article by Cary N. Calkins, Ph.D., in the April *Century*.—*The Designer* for April is brimful of seasonable stories, poems and articles of general interest.—*Scribner's Magazine* for April gives a very effective and artistic presentation of the beauties of the World's Fair at St. Louis in a series of drawings by Jules Guerin, four of them reproduced in colors.—In his discussion of the use of the so-called "split infinitive," in *Harper's Magazine* for April, Professor Lounsbury brings to light the fact that the use of the preposition "to" with the infinitive is itself a corruption.—The gospel of good cheer brightens every page of *The Youth's Companion*. Although the paper is nearly seventy-seven years of age, it does not look back on the past as a better period than the present.—The April *Delineator* is an uncommonly interesting magazine, from the standpoint of both fashion and literary features. Almost as good as a trip around the world, educationally, promises to be the pictorial series *Around the World in Eighty Pictures*, the first installment of which appears in this number.—Talcott Williams contributes a masterly statement of the real meaning of the Russo-Japanese war to the April number of *The Booklovers' Magazine*.

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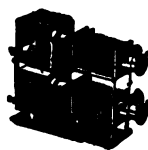
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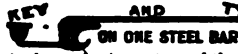
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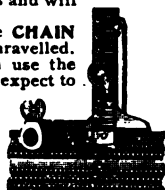
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## CONTENTS

|                                                                                                           |     |
|-----------------------------------------------------------------------------------------------------------|-----|
| The Supervisanship. <i>W. E. Chaceollar</i>                                                               | 517 |
| The Application of the Binocular Photograph (Stereograph) to Geography Teaching. <i>William E. Loag</i>   | 526 |
| The History of Economic and Political Study in Williams College. <i>C. J. Bullock</i>                     | 532 |
| Lessons in Genetic Psychology and its Relations to Modern Pedagogy. (Concluded). <i>John Ogden, LL.D.</i> | 538 |
| Music in Elementary Schools. <i>Principal Henry Lincoln Clapp</i>                                         | 548 |
| The Passing of the Spelling Book. <i>Alice Reuter</i>                                                     | 556 |
| Song of the Earth-born. (Poem.) <i>Helen Cary Chadwick</i>                                                | 561 |
| Education in Porto Rico. <i>A. W. Meritt</i>                                                              | 562 |
| Editorial                                                                                                 | 566 |
| Foreign Notes                                                                                             | 569 |
| Book Notices                                                                                              | 575 |
| Periodical Notes                                                                                          | 580 |

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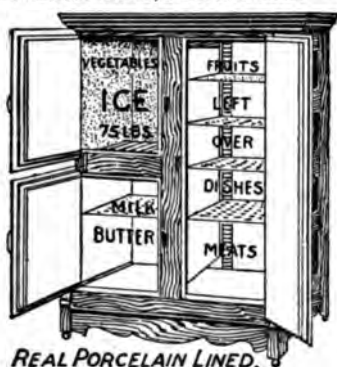
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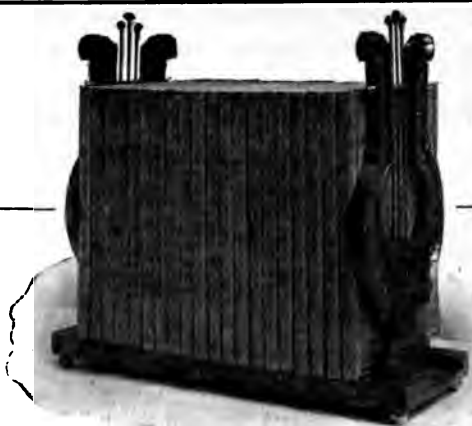
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## Elements of Plane Geometry

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**I**N recent years, numerous treatises on Geometry have made their appearance, all purporting to present the elements of the subject in a form suitable to the beginner. Whether they have succeeded in their designs must be left to the judgment of teachers. From the testimony of teachers, however, we cannot but infer that most of those treatises have proven a dismal failure as far as their utility to the beginner is concerned. Let us now consider the reasons why they have fallen short of their mark :

¶ 1. The demonstrations found in present texts are too lengthy and tedious to appeal to the beginner. They cannot, therefore, help being obscure, ambiguous, and loosely constructed, and worst of all, abstruse. Long demonstrations can be appreciated by mathematicians, but they only serve to confuse and discourage the beginner, and to imbue him with an aversion for the subject. He is generally lost before he gets to the end of the proof. At best, he can not remember the proposition, even though he may learn it for the moment.

¶ 2. The authors of these texts have neglected to preserve the continuity of the subject, and the interlocking relations between the propositions. The beginner thus sees the subject in the light of a fragmentary string of disconnected facts, and derives neither pleasure nor profit from its study. In short, the student fails to catch the spirit of the subject-matter.

¶ 3. They have made little or no attempt to train the student to attack original exercises. He has become accustomed to repeating demonstrations from the book, and when confronted by an original exercise, is at a loss to know how to proceed. He approaches it from every direction with equal failure, and is naturally disheartened by his inability to apply his knowledge.

¶ 4. From the faulty formation of the proofs the student acquires a tendency to memorize literally. This practice is prejudicial to his subsequent progress in mathematics. He draws little benefit

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from his study, and generally knows less at the end than he knew in the beginning. The purpose of Geometry is not to exercise the memory, but to train the observation and the faculty of reasoning. History is a better subject for memory work. We might add that many of our best secondary schools have been obliged to discontinue the use of text-books in teaching Geometry. Numerous other weaknesses could be pointed out that have contributed to the downfall of the books in question.

¶ In the present work, the aim of the authors has been to eliminate the difficulties cited above, and to remove any possible obstacle in the way of the beginner. This work bases its claim to usefulness on the method of presentation; on its ability to enlist and to hold the interest of the student, and to make him feel that he is mastering the subject; on its ability to make him read the book step by step with increasing intelligence and enthusiasm. He is led to observe that his studies are not in vain; that there is incalculable benefit to be gained from the subject, not only in mental discipline but in actual application. He learns that the study is not mere theory, but that it also has an intensely practical value.

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## *The Supervisorship*

W. E. CHANCELLOR, BLOOMFIELD, N. J.

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UPERVISORSHIPS have been established in many comparatively small towns, and in nearly all cities, for four distinctly different reasons: I. Because supervision has been recognized as an extremely valuable help in the establishment of good schools. This is a general reason.

II. Because in the cases of the installation of new subjects in the course of study,<sup>a</sup> it has often been found that many old teachers were unfamiliar with them. In these cases the supervisors have been employed as specialists either to teach the children, directly, or to teach the class teachers how to teach the children. All the subjects of the so-called "new education" have been introduced only by means of experts in them: that is, artists, musicians, woodworkers, physical trainers, etc. In actual practice in all communities the supervisors or assistant supervisors teach both the children and the teachers, often at the same time, by means of illustrative lessons. Supervision involves illustration as well as criticism by blame and praise.

III. Because in actual fact the superintendent is often unable to give that detailed supervision which the schools actually need. His administrative duties grow with the growth of the community; and as they grow the time available for supervision decreases.

IV. Because in a large school system there can be no



uniformity without comparison of schools. This can be made constantly only when the supervisory force is adequate.

V. Because the average grade of work in certain lines has fallen so low as to require special attention. In consequence, various supervisorships have been added, all of them being in the nature of outgrowths of the superintendency, its branches as it were. All supervisorships represent the central office and all supervisors are the direct agents of the superintendent. The fact that many supervisors know more about their subject does not in the least affect the relationship. Reason I. has supported the creation of every kind of supervisorship. Reason II. has led to the creation of supervisorships in art, manual training, music, physical training, kindergarten, domestic science and art, nature-study, reading by phonic methods, German, French, Spanish, medical inspection of health. Reason III. has led to the creation of associate and assistant supervisorships. Reason IV. has led to the creation of grammar grade, primary grade, and kindergarten supervisorships and to various forms of inspectorship. Reason V. has led to the creation of supervisorships in any and all of the standard school studies and exercises, penmanship and reading supervisorships being very common.

Many supervisorships indicate not that most of the teachers do their work poorly, but that the educational standard of the community is high, and that the course of study is broad. The superintendent who advocates supervisorships does not create the impression that he himself is inexperienced and idle, but that he means to have good schools and feels competent to manage specialists. Since most boards of education contain members who are willing to magnify the importance of their office, it is seldom as difficult to secure the new supervisorships as it is to raise the salaries and the general quality of old supervisorships. The drift in American education to-day is fast becoming a current that bears many supervisorships into the school systems. For the protection of the school children, educators in office must see that adequate standards and salaries are provided and adequate qualifications are demanded to secure good supervisors.

The duties of the supervisor are these, namely: (1) To

represent worthily the department in which he serves, and fairly the policy of the superintendent whom he represents. For a principal to oppose the policy of the school superintendent is unfortunate for both; it is disloyalty to the best interests of the schools unless the opposition is open warfare, public and continuous, and designed to secure the removal of the superintendent. But for a supervisor to oppose the policy of the superintendent is a kind of school treason, and is essentially unforgivable. This is equally true whether the treason is secret or open, and whether the supervisor was appointed before or after the superintendent. This principle ought to be recognized by all teachers and ought to be enforced by all boards of education. (2) To hold regular meetings for the instruction of the teachers; to furnish them with outlines and programs; to counsel with them. (3) To exemplify his own art; to understand its inherent method; and to be able to correlate it with other school subjects. (4) To organize exhibits (or entertainments) by which the school children's proficiency in the supervised department may be shown to all persons interested. (5) To supervise the work of all teachers who give any instruction in his art and to report thereon to the superintendent. (6) To give in the classes lessons in the art for the instruction of the children or of the class teacher or of both. (7) To grow in knowledge and in skill; that is, in both general and technical knowledge, and in skill both as an artist and as a teacher of the art.

The supervisorships are the weak spot in most small school systems, being relatively poorer in the persons occupying them than the principalships and the teacherships. The reasons are two:—

I. The supervisorships are a recent development.

II. They are hard to fill at the salaries these new positions are considered worth by the boards of education.

To illustrate a typical condition: \* Superintendent, \$3,000; high school principal, \$2,000; elementary principals, \$800 to \$1,200; † supervisors, \$600 to \$1,000; ‡ high school teachers, \$600 to \$1,400; elementary teachers, \$450 to \$675.

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\* These are the actual figures of a certain small city in the East, 1903-4.

† Paid to principal of a school of eight hundred children.

‡ Paid to general primary supervisor.

Leaving the maximums and minimums as they are, this would be a far more reasonable condition, namely: Superintendent, \$3,000; high school principal, \$2,400; elementary principals, \$800 to \$1,800; supervisors, \$700 to \$2,000; high school teachers, \$600 to \$1,400; elementary teachers, \$450 to \$675.

This latter arrangement undoubtedly involves spending more money, but it accords with certain fundamental and essential relations. It gives the supervisors higher salaries than any persons receive who are to be supervised. To send a thousand dollar elementary school supervisor to supervise the school of a twelve hundred dollar principal is to accomplish only bitterness. To send a six hundred dollar special supervisor to help a six hundred and seventy-five dollar teacher is equally unnecessary, for it can avail nothing good.

Without going for salary details, proper rank in salaries may be indicated as follows, namely: Superintendent; associate superintendent, if any; assistant superintendent, if any; high school principal; grammar or primary superintendents, or grammar and primary supervisors, if any; principals of elementary schools; supervisors of special subjects; high school teachers; elementary school teachers and kindergartners.

It is a fair question whether men or women make the better supervisors. It is my belief that men make the better administrators. As a general proposition, women make the best supervisors. They are more interested in details. They do not make as good associate or assistant superintendents, however. From the general proposition certain exceptions may be taken.

In the art of supervision women generally do better than men, but not in large school systems, because of their physical inferiority and lack of administrative powers. In music men do better. Their voices seem to attract the children more, and give a variety to the singing of the teachers. But at the same salary in a small system women are preferable, owing to the inferior character of men who care to take low salaries. Few women, however, can persuade many boys and girls to sing.

NOTE.—Undoubtedly length in office and size of school ought to be considered in the matter of elementary school principalships in the smaller cities. What subjects ought to receive the highest salaries is discussed later.

In manual training obviously the work for boys ought to be conducted by men, and that for girls by women. Similarly domestic science and art must be conducted by women.

Physical training: here it is best to have a man for the high school and upper grammar school, and a woman for all other students.

The primary grade supervisors, and special supervisors in nature-study, reading, kindergarten, ought to be women, because they deal most largely with the smaller children.

The medical inspection of schools ought to be conducted by men and women physicians. This inspection is now altogether too infrequent or too perfunctory. A separation of the sexes for this purpose is essential.

The supervisors of modern language instruction, when given in the elementary schools, may be high school teachers. Sex is a matter of indifference, except so far as the difference in salary is concerned.\*

Of these various supervisorships the salaries are likely to vary somewhat for the following reasons, namely: (1) The difference in the length and in the expense of the technical preparation. An art education takes many years, and is relatively expensive. (2) The difference in the experience of the supervisors. Almost inevitably some supervisors will be many years older than others. (3) The difference in the number of teachers to be supervised. Art covers all grades. Domestic art and science but few grades. (4) The difference in the difficulty of acquiring the knowledge and the skill requisite for success. This is a matter of native talent and of supply and demand on the market. (5) The difference in the supervisor's opportunity to earn money outside of his regular school duties; that is, some supervisorships require more before and after school work than do others.

Fortunate is the city that can avoid all this discussion by

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\*It is a hard fact, from which we cannot escape, that in this decade of the twentieth century men command salaries from twenty-five to a hundred per cent greater than women of equal competence. From this it is not to be concluded, as democracy has erroneously concluded, that there can be a good grammar or high school without men teachers. This is impossible; such an effeminate affair is a-symmetrical. It is a hotbed of feminine whims and tyrannies.

paying a uniform high salary regardless of the market for supervisors' services. Then to avoid all jealousies the superintendent must see that all supervisors do about the same amount of work daily, weekly, and yearly.

To illustrate: To the physical training teachers whose lessons begin later in the school season and end considerably before commencement, the superintendent may assign a light gymnastic exhibition; or if his city system has a gymnasium, a complete gymnastic exhibit. By some ingenuity and forethought these matters can be fairly adjusted.

Three comparatively new supervisorships (or inspectorships) remain to be considered: that of the physician, that of the sociologist, and that of the psychologist.

The medical inspection of schools has now advanced to the point of eye and ear tests, and to the effort to eliminate incipient contagious diseases. In connection with the physical training work may be made simple strength, lung capacity, and other tests. But these are by no means enough.

We have gone as a nation knowledge-mad in our schools. We think it none too much to keep a daily record of a child's mental condition, and to send home a monthly report of his mental progress. For his physical condition and progress, for his health, which is the foundation and the substance of him, we care little, sometimes nothing. Once in awhile we wake up with a shock to the fact that he is physically defective or to the fact that he is morally debased, a condition that more often results from physical than from mental causes.

Medical inspection of the school and of the individual is a protest and is progress. I believe in the following program and record, namely: Semi-annual inspection of each individual. (1) Each eye, right and left; (2) Color blindness, each eye; (3) Balance of eyes; (4) Each ear, right and left; (5) Throat and nose, for adenoid growths, etc.; (6) Lungs and chest; (7) Spinal system, for curvature, etc.; (8) Strength; (9) Nervous force; (10) Health, especially digestion and sleep.

As to each an illustrative note: (1) In a certain high school, upon the beginning of such inspection, a girl was discovered totally blind in one eye, and going blind in the other, who did

not know it. Result: Eye saved and other partly restored. (2) In an elementary school a boy who desired to become a designer was discovered color-blind in one eye as to red, and in the other as to every color. He was taught color for two years and was finally able to see all primary colors with both eyes. (3) I who write this article was blind for several years in one eye, due to suppressed vision, and was afflicted with a painful and apparently incurable disease of the eyes. After years of anxiety and of advice in both Europe and America, a few simple surgical operations by a skillful diagnostician and operator \* restored my sight sufficiently to write this and other articles and books. A competent school physician would have saved me many years of pain and of other trouble. (4) Deafness is seldom painful, but as it is often a progressive disease, the sooner its presence is known the better. It is a dangerous disease in the modern world of steam and electric cars, of machinery, and of all manner of automobiles. (5) In a certain town a boy of fourteen was afraid to go up and down stairs; could not eat; would not study; looked fairly well. A teacher, who knew something about physiology, sent him to a throat and nose specialist, who removed seven adenoid growths from the throat and nose. Three months later the boy was the delight of his parents for physical energy and of his teacher for his mental power. (6) Consumption is too frequently discovered to justify mention of particular cases. (7) One in four of high school girls seems to have spinal curvature well begun, sometimes well developed. (8) An examination for strength is important before boys are allowed to play on school football teams. Every high school ought to have a gymnasium to remedy weak muscles. In a certain school the mother of a girl who was re-made by a year's gymnasium work,—she was an intelligent but a poor woman,—hearing that the politicians proposed "to close the gymnasium," offered fifty dollars from the savings bank toward its maintenance. This is the eloquence of fact. (9) By nervous force is meant speed and persistence and regularity. This is an almost perfect test of health. (10) To put an end to the drink-

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\* Wm. R. Broughton, M.D., New York City, since then member Bloomfield Board of Education and medical oculist adviser, Montclair, Passaic and Bloomfield public schools.

ing of strong coffee at breakfast, and to sleeping with closed windows, with two children in a bed, are two features of the program of the school's warfare against ignorance, disease, and poverty,—man's trinity of miseries.

The above are at best mere illustrations and suggestions. The importance of the subject in the sphere of school administration is by no means indicated by the small space given to it here. I could easily fill a hundred pages. The real trouble is that horses, houses, and shoes cost money; boys and girls do not. Moreover, it has not yet been sufficiently "hammered" into the consciousness and the conscience of men that "we are all members one of another."

To illustrate: A certain man of property gave his only daughter a most elaborate education. A neighbor's son desired to go to college, and applied for assistance by the influence of the rich man and by loan of money. He got neither. However, he went to college, working his own way. After graduation the girl and the youth fell in love. To break the match the rich man took his daughter to Europe. The youth, overworked, died of hasty consumption. Four months later the girl died of "nervous prostration" and a "broken heart." This was in New England.

To illustrate again—this time from the Middle West: On the prominent street an only son, and heir to a fortune. In the back alley a family of the poor, with scarlet fever, neglected until far advanced. The poor children went to a hospital and lived. The rich boy took the disease and died. Verily, when one member suffers all the members suffer with it.

A third illustration in a great American family, so rich, so strong from generation to generation as to amount to a dynasty: A son married the beautiful daughter of several generations of the poor. The care of her station and its strange surprises sent her to an asylum at forty—a helpless lunatic. Her three sons are there to-day.

"They are not my children," the man of culture, or of blood, or of station, or of power, or of wealth, may say. Very true. But they may be the wives or the husbands of your children, or the grandfathers or grandmothers of your grandchildren.

In a certain city there arrived one day a young man utterly unknown; within two months he had met the heiress of the city's richest man; within a year she was an abandoned wife with a child; and within two years the child's father was in the penitentiary for forgery, with an indictment for bigamy over his head. And the young man proved to be a product of one of the rich man's slum tenements, a product veneered by a few years' service as the valet of rich young men.

Eternal vigilance is the price of liberty; infinite solicitude for others is the price of safety. This line of argument serves for the two other supervisorships. The sociologist is needed in every considerable school system to advise regarding courses of study, location of schools, plans for school buildings, parents' associations, neighborhood clubs, evening lectures, boys' athletics and games, mothers' clubs—whatever concerns society. His business is to know and to understand all localities. He is needed because the school is becoming the new integrating social center.

Similarly, the psychologist is needed to pass judgment upon all individuals with any peculiarities of note. He is to forestall all wrecks. Let him study pedagogical methods, nascent interests, mental traits of all kinds. Let him diagnose and prescribe. Such a man can do more good than a big library of books, because he is a library of knowledge ready for use. The sociologist and the psychologist may often assist and supplement each other. They should be of opposite sexes, so as to see things from opposite points of view. The woman will be the sociologist and the man the psychologist.\*

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\*I offered this suggestion seven years ago—eighteen hundred and ninety-seven. It was evidently in line with the march of events. Four years ago a consulting psychologist was regularly employed in one city. There are now several such psychologists in as many cities. The work of both sociologist and psychologist is now actually being done, but to differentiate their functions out of present positions and to integrate them in new and definite positions is to make vast progress.



## *The 'Binocular Photograph'* (Stereograph)

### *Its Application to Geography Teaching*

WILLIAM E. LONG, NEW YORK CITY.



HE remark of Professor Sully that visual images or pictures constitute the staple of our ordinary recallings is worthy of more than a passing thought. To recall our home, school, friend, garden, does not mean to bring to the mind something heard, but in ninety per cent of cases it means to reproduce a mental picture of these things—to visualize them. In proceeding then to the unknown, as to a study of a strange and foreign people, how much more necessary it is to provide the student with some concrete basis for his visual concepts.

One purpose of mental imagery is suggested by Emerson: "A man conversing in earnest, if he watches his intellectual processes, will find that a material image more or less luminous arises in his mind contemporaneous with every thought, which furnishes the vestment of the thought. \* \* \* A new interest surprises us whilst, under the view now suggested, we contemplate the fearful extent and multitude of objects; since 'every object rightly seen unlocks a new faculty of the soul.' That which was unconscious truth becomes, when interpreted and defined in an object, a part of the domain of knowledge—a new weapon in the magazine of power." A direct inference from such a philosophy is that an increase in number and distinctness of mental images means a corresponding increase of intellectual force and that there is a rich benefit in a "manifold contact with the actual."

Verbal descriptions, however intense the interest may be, fail utterly at the vital point. A description may be so accurate and the imagination of the student so vivid that he is able to visualize quite clearly an object which he has never seen either in the original or representation; but he will never by this method be made to feel that he has seen it. The image will

never become a part of his life—the “vestment of his thought” on the subject. Witness the experience of Enoch Arden:—

“Now, when the dead man come to life beheld  
His wife, his wife no more, and saw the babe  
Hers, yet not his, upon the father's knee,  
And all the warmth, the peace, the happiness,  
And his own children tall and beautiful,  
And him, that other, reigning in his place,  
Lord of his rights and of his children's love,—  
Then he, though Miriam Lane had told him all,  
Because things seen are mightier than things heard,  
Staggered and shook, holding the branch, and feared  
To send abroad a shrill and terrible cry,  
Which in one moment, like the blast of doom,  
Would shatter all the happiness of the hearth.”

There was certainly no want of interest or attention on the part of Enoch Arden in the history of his family as it was originally related to him by Miriam Lane. She had stated all the facts with a cruel impartiality; but it was the seeing that overpowered him. As he looked through the window of his successful rival's home, no sound reached him, nor was any necessary to fill completely his cup of woe. “Things seen are mightier than things heard,” or, as Professor Sully has expressed it, “One seeing is worth a hundred descriptions.” *Segnius irritant animos demissa per aurem, quam quae sunt oculis subjecta fidelibus.* \*

The normal plan of mental development is marked by three stages. First, the acquisitional. During this period the young child is occupied with acquiring material—accumulating the raw sense data of perception from which he will afterwards by apperceptive processes elaborate his own concepts. This data must come through the senses, and much more will in the end come through the sense of sight than by all others combined.

Second, the elaborative—during which the materials are examined and recombined and the young mind gradually adjusts itself to its environment.

Third, the expressional, the beginning of which is marked by the dawn of the desire to show the world to others as it appears through the lenses of his mind. To be sure, the first overlaps the second, and the first and second extend into the third; but

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\* “Things seen by the trustworthy eye more deeply impress the mind than those which are merely heard.”—*Horace*.

the periods when each begins, reaches its maximum development and wanes, are quite clearly marked in the normal individual.

We are concerned now more properly with the first, the acquiring of the data of perception. We know how the sense of sight gradually increases in importance until finally it is the chief avenue of approach to the mind. That visual impressions are the most vivid, the most lasting and the most comprehensive, is now a well-known fact. Literature suggests it; science recognizes and countersigns it with the stamp of its authority. Corollary to this we may say that visual instruction should be practiced whenever possible, especially in the primary and grammar, and even into the secondary schools, bringing the student face to face with the visible world as a place for man's habitation and with man himself as an inhabitant of the earth. This is done by travel, or by any other means by which the original can be shown to him. But as such a method would be impracticable with the vast majority of children, an effective substitute for travel has come to be one of the recognized needs of the school. The first step in this direction was in the use of pictures.

The general use of pictures in school dates from the publication of the *Orbis Pictus* by Comenius nearly two and a half centuries ago. In this book the "distinguished Moravian" undertook to bring the visible world to the child by pictures in lieu of material objects. Following the Aristotelian principle, *Nihil est in intellectu quod non prius fuit in sensu*, he spared no effort to place the material for sense perception within the reach of the child. The author says "to exercise the senses well about the right perceiving the differences of things will be to lay the grounds for all wisdom and all wise discourse and all decent actions in one's course of life, which, because it is commonly neglected in schools, and the things which are to be learned are offered to scholars without being understood or being rightly presented to the senses, it cometh to pass that the work of teaching and learning goeth heavily onward and affordeth little benefit."

The publication of the *Orbis Pictus*, which was for a time the "most popular text-book in Europe," marks then the beginning

of the movement in favor of pictures as a medium of instruction—a movement which has received a decided impetus within the last two decades. The engravings of Comenius' book are of the rudest sort, and it is partly to the improvement and cheapening of illustrations, especially in photography, as well as to the increasing demand for such material, that the impetus above referred to must be attributed. The illustrations in current use in the modern schoolroom consist chiefly of cuts of varying degrees of excellence, made usually from single monocular photographs. When photographs are not available the illustration is made from a drawing. The stereopticon, or magic lantern also, is now used in many schools, and has its own peculiar advantages. It is very rarely, however, that the original photos themselves are used.

But the device that is acknowledged to be far superior to any and all others is the stereograph, which consists of two photographs taken simultaneously from points as far apart as the two eyes. These two are then blended into one in the stereoscope, and the result, through utilizing the powerful influences of binocular perspective, is to cause the student to feel that he has suddenly been taken to the country he is studying.

With the principles of binocular vision not all are familiar; so, before proceeding to an examination of the comparative value of monocular and binocular representations, may we not glance hurriedly at some relevant statements of recognized authority. Professor Ladd says, "But visual space, as experience makes it known to us, requires binocular vision with moving eyes." And again: "But all the achievements possible to a single eye, when open and in motion, would not avail to produce the presentations of sight as our ordinary experience is familiar with them. Strictly monocular vision is for the most part a fiction of science." The author further proceeds to show how the visual impressions we do really get with one eye alone are supplemented by recollections of experiences previously acquired with both eyes working together, thus reaching logically the conclusion that strictly one-eye vision does not exist. He answers the old puzzle, "How do we see only one object when we have two eyes? Why do we not see two objects?" by

the dictum that two eyes working together are an absolute necessity if we are to get a correct visual impression ; so instead of being confused by considering how we can see with two eyes, it is clear that we cannot see well without them.

Now it is plain that a representation cannot in any case furnish all the data of vision at first hand ; that is, no picture can be altogether as good as original sight. But it is just as clear that as far as monocular vision is inferior to sight with both eyes, at least so far will monocular representations be inferior to those which are in accord with the principles of binocular vision. Indeed, a moment's reflection will show that more difference exists between monocular and binocular photographs than between natural sight with one eye and with two ; for all photographs lack color and motion, both of which operate as an aid in compensating for the loss of one eye in natural sight. These being absent in the photograph, the mind is, in the case of the single picture, thrown back on the bare resource of monocular perspective, and must form its judgments of depth, distance, and relative size of objects chiefly from lights and shadows and receding lines ; while in the binocular photograph the mind has besides these data the powerful aid of the double images and convergence of the two eyes.

There is also to be considered the necessity of excluding from sight everything which is not characteristic of the scene to be studied. In the contemplation of pictures this is never done. The student sees the book, desk, room, playmate ; the illusion is so fleeting, so incomplete, that he never for an instant regards it as he would the original. But is this true with the stereoscope ? First, he has an image on each eye, and they differ to just the proper degree ; second, his eyes turn toward the nose in combining these pictures just as in natural vision ; and third, his eyes are enclosed by a screen, and he must think that he is in Egypt or Cathay. It is not reasonable to expect a student to feel that he is in China when his eyes tell him that he is surrounded by American children in an American schoolroom—when, in brief, the atmosphere is American. All are familiar with the case of the telephone. If anything could make one feel that he is in Buffalo when he is really in New York, it

would seem that it would be the telephone, for the voice which he hears and recognizes tells him that the person who is speaking is in Buffalo. But the fact is, instead of inducing in us the sensation of being in Buffalo, we feel that our friend is here in New York; we even emphasize our utterances by gesticulations, as if he were present and could see them. But, after all, this is a phenomenon that is easily accounted for. We always feel that we are just where our eyes bear testimony that we are. The messages of the eyes are always given more weight in the formation of judgments than those sent by the ear when both messages are received at the same time. To feel that I am in Buffalo when my eyes tell me that I am in New York is just as impossible as for the child to feel that he is in China when his eyes tell him that he is not. Obviously, then, the remedy will be to give his eyes but one message to report to the brain, all others being canceled; and let that message be: "This is China; there is the pagoda (you know the peculiar architecture); there is the Chinaman (you recognize his dress, and you have seen the queue). Why, this is a Chinese atmosphere! And what is that plant? And what are these coolies doing?" The stereograph has delivered its message. Then the student finds (and usually from another source) that he is actually looking at a tea field. He has seen tea,—perhaps he has drank some,—but he never knew it grows that way, is cultivated that way, by those strange people, in that strange land. But there are the clouds—the same as in our sky at home; there are the shadows—just as bodies cast in the sunlight at home. This is all *terra firma*; it is not wonderland, it is not magic; it is the plain, unvarnished tale delivered by the eyes to the wondering, inquiring mind of the child. Hereafter, when he thinks "tea field" there will rise in his mind, not a recollection of verbal descriptions he has read, not a pale, mirage-like image of some picture he saw,—an image which recedes as he tries to approach it for analysis,—but there will "flash upon his inward eye" a clear, solid, substantial, accurate image of a real tea field. And its setting will not be a schoolroom, lecture room, book or art gallery, but he will think "tea field" in China. He has "seen with emotional sight." He knows and feels that he knows.

## *The History of Economic and Political Studies in Williams College*

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HISTORICAL and political studies seem to have been almost wholly neglected in the American colleges of the colonial epoch. In this direction the first serious impulse came from the stirring discussions of the Revolutionary period and of the years that witnessed the adoption of the Federal Constitution. In 1784 the first law school was established at Litchfield, Connecticut; and during the next twenty years lectureships or professorships of law were created in various institutions. Before this movement had spent its force, political philosophy, political economy, and, in some cases, history had benefited by the interest thus aroused, so that one or more of these subjects found a place in the curricula of many colleges.

The "Free School" at Williamstown was transformed into Williams College in 1793, at the very time when our institutions of higher education were beginning to recognize the importance of training young men for the legal profession, the service of the State, or the common duties of citizenship. In the first invoice of books purchased for the college library, political and historical works were well represented; and upon October 20, 1794, Hon. Theodore Sedgwick, at that time a member of Congress, was appointed Professor of Law and Civil Polity. It does not appear that Mr. Sedgwick ever entered upon the work of his professorship—a fact which may be readily explained by his absorption in the duties of public life or by the meagre resources of the college; but it is interesting to note that this was the first professorship which the trustees attempted to establish.

In 1795 the first laws for the government of the college were adopted. From these we learn that the studies of the fourth year were "metaphysics, ethics, history, the law of nature and nations, civil polity, and theology." Thomas Robbins, a member of the class of 1796, writes in his diary, under the date

of January 1st of his senior year, "Reciting now Paley's Moral Philosophy"; and under the date of March 22d, "Began to recite Vattel." Instruction in these subjects was given by President Fitch, as we learn from a letter \* written by a member of the class of 1802 who says, "Those students who were instructed by him during their senior year will never forget the ability and interest with which he explained and illustrated the writings of Locke, Paley, and Vattel."

The facts just mentioned are sufficient to establish the character of the instruction given in political philosophy and international law; concerning the study of history, however, no evidence is now available. Paley's *Principles of Moral and Political Philosophy*, published in England in 1785 and republished in Boston ten years later, devotes one entire book—the sixth—to the philosophy of the State, and treats of such subjects as forms of government, civil liberty, and the administration of justice. This book was used for many years at Williams, as elsewhere. Its author was a conservative by temperament, and a friend of the established social and political order; and these qualities would naturally commend his writings to such an ardent Federalist as President Fitch, who was greatly disturbed over the revolutionary movement in France and the rise of Jeffersonian democracy in the United States.† In his baccalaureate sermon of 1799, Dr. Fitch warned the graduating class that "every civil and religious institution is threatened with ruin," that "the principles of deism, atheism, and disorganizing politics have of late years made rapid strides," and he urged his hearers to oppose manfully the progress of these destructive tendencies.

This arrangement of studies probably remained unchanged for many years. The College Laws of 1805 repeated the provisions of those adopted in 1795; the Laws of 1815 are more general in their terms, but prescribe that history and the law of nations shall be included in the curriculum. These subjects, undoubtedly, fell to the charge of the president. In 1812 Hon. Daniel Dewey was appointed Professor of Law and Civil Polity, but it is not known that he ever gave regular instruction

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\* Durfee, *History of Williams College*, p. 77.

† Cf. Perry, *Williamstown and Williams College*, pp. 230-233.



in the college, although his name appeared in the catalogue until his death in 1815. The laws of the latter year state merely that "the Professor of Law shall occasionally deliver lectures to the senior sophisters or to all the students."

In 1822 the catalogue of the college contains for the first time a statement of the courses of instruction. From it we learn that history was one of three subjects studied during the third term of the sophomore year, and that Tytler's *Elements of History* was used as a text-book. In the senior year Paley's *Political Philosophy* was studied during the second term, and Vattel's *Law of Nations* during the third. Altogether, one third of the instruction for three terms, or about one twelfth of the college course, was devoted to these three subjects. History was probably taught by one of the two tutors who had charge at this time of most of the studies of the lower classes; the senior courses were conducted chiefly by the president.

In 1827 William Porter was called to a newly established chair of Moral Philosophy and Rhetoric, and he appears to have relieved President Griffin of most of the instruction of the senior year.\* Paley's *Moral and Political Philosophy* was now replaced by Say's *Political Economy*, of which an American translation had appeared in 1821; Vattel's *Law of Nations*, however, was retained several years longer. History held its place in the third term of the sophomore year.

In 1828 a *Manual of Political Economy*, by Willard Phillips, was published at Boston, and this work was immediately introduced in the place of Say's treatise. When we recall that in this year the passage of the "Tariff of Abominations" stimulated excited discussions of the tariff question, and that Phillips was an advocate of protectionism, we may venture upon the conjecture that Professor Porter was dissatisfied with the teachings of Say concerning freedom of trade. At any rate Phillips' *Manual* continued to be used in the college for a number of years. When Mark Hopkins was called to the chair of Moral Philosophy in 1830, Paley's work was reintroduced, but only to supplement and not to displace Phillips and Vattel.

In 1835 Joseph Alden was called to a new professorship of Rhetoric and Political Economy, and more adequate provision

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moir of W. A. Porter, p. 41.

was made for instruction in political and economic science. In his inaugural address in 1836, President Hopkins alluded to the recent introduction of the study of political economy, and expressed the hope that means could be provided for instruction in constitutional law. For this a place was found in the same year, when Professor Alden discarded Vattel and introduced Story on the Constitution. The sophomore course in history remained as before, and, after a time at least, came under the charge of Professor Alden. In 1837 the course in political economy was shifted to the first term of the junior year, and in 1840 Wayland's well known treatise was introduced as a text-book. Professor Alden was a Jeffersonian Democrat and a free trader, but seems to have made more of his lectures upon the the United States Constitution \* than of his work in history and political economy. In 1843 a course in American history was introduced in the second term of the junior year, and in 1844 this was placed among the studies prescribed for sophomores. Two years later, however, this subject dropped out of the curriculum.

At this point it will prove interesting to compare the development of political and economic studies at Williams with their history at a sister institution, Dartmouth College.†

At Hanover these studies were first introduced in 1796, under the stimulus of the same influences that were felt at Williams in the previous year. In Dartmouth the juniors were given instruction in Paley's Moral and Political Philosophy by the professor who had general charge of that class; while the seniors, under the guidance of President Wheelock, studied Burlamaqui's Principles of Natural and Politic Law, of which an American edition had been published at Boston in 1793. In 1804 the course in political philosophy was transferred to the charge of the Professor of Divinity, and in 1823 to the Professor of Moral and Intellectual Philosophy. In 1822 instruction in constitutional law was given to the seniors, and in 1828 a chair of Moral Philosophy and Political Economy was created. Professor Roswell Shurtleff, the incumbent of this chair, intro-

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\* Cf. A. L. Perry, *Miscellaneous*, p. 142. Williamstown, 1902.

† See J. F. Colby, *Legal and Political Studies in Dartmouth College, Hanover, 1896*.

duced Say's Political Economy in the place of Burlamaqui's Natural and Politic Law; and continued for a decade the use of Paley's Political Philosophy and the Federalist. In 1838 Paley was replaced by Wayland's Moral Philosophy, and in 1842 a course in Kent's Commentaries on American Law was offered to seniors. Some years later the latter work was displaced by Story's well-known treatise. The general similarity of development in the two institutions is emphasized by the fact that Dartmouth, in 1808, made unsuccessful efforts to establish a professorship of law.

At Williams the next important event was the resignation of Professor Alden in 1852. After an interval of a year, Arthur Latham Perry was called to a professorship of History and Political Economy; and commenced those studies, especially in the field of political economy, which soon brought him a national reputation and secured distinguished recognition in France and England. Although compelled by the poverty of the college to give instruction in German and in Christian Evidences for many years, he soon built up a strong department of history and political economy. To the sophomores he gave instruction in history, at first for one and later for two terms, introducing newer and better text-books, as they appeared, in place of the wretched treatise by Tytler. To the juniors he offered a course in political economy for which he published, in 1865, the first of his well-known books, *Elements of Political Economy*. In addition, Professor Perry continued the work in constitutional law which had been begun by his predecessor. This study was, in 1859, transferred to the junior year, where it long remained; at the outset Story's work was used as a text, but in time the instruction came to be given by lectures. Upon an average, during the period from 1857 to 1887, the three subjects above mentioned occupied about one-eighth of the entire college course, and until the latter year they were required of all students.\*

In 1871 Orrin Sage, a Massachusetts manufacturer, gave the college \$50,000 as an endowment for Professor Perry's chair. In part, at least, this action was the result of the attacks which

\*Cf. A. L. Perry, *Miscellanies*, pp. 141-148.

had been made from time to time upon Professor Perry's views concerning the injustice and inexpediency of the protective tariff. The trustees of the college had at all times upheld the independence of the department of political economy, but the gift was prompted by a desire to place the chair upon the most secure foundation possible. So far as freedom of teaching is concerned, few, if any, American colleges can boast of better traditions.

In 1882, with the coming of the elective system, there was established an elective course in European history, conducted by a new instructor. This marked the beginning of the separation of the departments of history and political economy, which became complete when, in 1890, an endowment was received for a chair of American History. In the following year Professor Perry closed his long term of faithful service to the college, and John Bascom was made acting professor upon the Orrin Sage foundation, which was thereafter devoted to the department of political economy. Thus at the close of the first century of its existence, Williams College had created two independent departments for the studies in which, at the outset, the president had instructed the seniors during the last half of the collegiate year.

With the history of the last decade it is not the purpose of this paper to deal. Suffice it to say that the establishment of new chairs of Political Science and of European History has enabled the college to extend and to specialize instruction in these subjects, so that now four professors are cultivating the field where Professor Perry labored so long and so successfully as Professor of History and Political Economy. In all this the college is but meeting the demands of the times for more extensive instruction in political and economic studies. To-day, as in 1794, it is attempting, so far as its resources permit, to prepare young men for the intelligent exercise of the rights and duties of citizenship; and now, as formerly, it seeks to prescribe, for students or teachers, no tests of political or economic orthodoxy. With such a record of honorable achievement, the college faces hopefully the educational demands of the twentieth century.

## *Lessons in Genetic Psychology and its Relations to Modern Pedagogy*

JOHN OGDEN, LL.D., MINNEAPOLIS, MINN.

### IV

(Concluded)

*The Feelings or Sensibilities*—the fountains and feeders of thought, the prompters and promoters of will power—involve the following operations and conditions. There are two general varieties, determined by the origin or sources whence they spring, as

1. The purely PHYSICAL SENSIBILITY, produced by sensations through nerve sources or senses, by means of the power physical objects have to impress mind, etc. (See "Origin of Thought," article No. 1.) It may be described by the following

#### DEFINITION XV

*Causatively*, as: The susceptibility or capacity the mind has to receive impressions from physical sources (through the senses), and to experience corresponding changes or nervous agitations, as revealed in and through consciousness; or, as purely *mental phenomena*, it is these sensations themselves which the mind receives or experiences from these known causes—the contact with externality. It also includes some forms of instincts, appetites and desires.

2. PSYCHICAL SENSIBILITY, or that which is purely subjective (see "Origin of Thought," second part), may be described by the following

#### DEFINITION XVI

As: The susceptibility the mind has to experience those psychic changes or agitations of the soul, not objective in source or origin, but purely subjective, though often set in motion through the action of the senses, as in sights and sounds affecting the soul. They embrace the emotions, affections and desires, of which the variety in character and degree is almost infinite; as in pleasure and pain in all their varieties, in joy and sorrow, in

hope and fear, in delight and despair, in love and hatred, in anger, scorn, contempt, rage, fury, frenzy, etc., all expressions of some of the forms in which our feelings manifest themselves.

3. There is also a *vital sensibility*, or the sense of vigor and languor, health and disease, heat and cold, rest and fatigue, etc.

NOTE.—In the study of this variety of mental phenomena the class will find great delight and profit, inasmuch as they reveal many of the elements that go to form human character. Moreover, in learning to analyze and classify these emotions, affections and desires, they learn their real character and value, and how to cultivate and control them in their lives.

#### THE HUMAN WILL

In presenting this third and last-mentioned power of the mind, we can do no more than give a very brief outline or statement concerning it. The subject is so vast that to attempt anything more would involve arguments and space that would be out of harmony with the plan of this series of articles. Its nature and office, that have already been alluded to in connection with other mental powers, may be inferred from a brief yet more formal description given in the following

#### DEFINITION XVII

*The Human Will*, the motor of the mind, is that self-determining power it has to order its own movements on the line of possible contingency; to make its own voluntary choice, and to execute its own decisions. Most of these decisions are reached

1. By a comparison of weight or force of respective incentives or motive, which weight or force the will has power to accept or to set aside as it may determine. There is no compulsion either way outside the *will itself*; and motive is powerless to impel, since it has no existence save in the future or in prospect. The will, therefore, is free to act, to choose as it may determine. It is even master of its own volitions, since these are acts of the will itself.

2. It has also *executive energy* (ἐν, in + ἔργον, work = inward work) or power to execute its own decisions—what it designs—the execution of which is subject only to will power “on the line of possible contingency,” since no power is capable of executing impossibilities. Volition itself, which is only an

act of the will, is therefore stronger than any motive or incentive, since it may refuse or accept either, irrespectively of any strength they may possess. Much more then is will, as an act of the mind, stronger than any incentive or motive, however great. It is therefore transcendental; and it is moved to act only by those innate resolutions and determinations wrought in the higher departments of the soul's faculties, and not by mere outward solicitations, strength of desire, or weight of incentive, however great. The very fact that the will has power to act at all, implies that its decisions are imperious and from within, otherwise there could be no decisions. Its acts are therefore regal, unimpeachable, and independent of any "highest motive or strongest incentive," Herbartianism to the contrary, notwithstanding.

3. The will may be cultivated and strengthened by legitimate use. It may be bent, but it *never* should be broken. It were better that every bone in the child's body be broken than to break that which God intended to be a guide to every high and noble purpose in life; a safeguard against evil and every temptation to wrong. Children should early be taught to say No to every solicitation to wrongdoing or selfish desire; and, on the other hand, to say YES to every noble sacrifice of selfishness, and to every solicitation to good and noble ambition. Every lesson in school life, in home life, in business, and pleasure, abounds in opportunity, even in solicitation to cultivate will power. It is the crowning excellence of education to fortify the soul against the encroachments of evil, and to establish it in the love of duty, and in the love of the beautiful, the true, and the good.

#### THE LAWS OF LEARNING AND GROWTH, OR THE MIND AT WORK—HOW IT GROWS

I. When we assert that every want in nature has its co-existent and co-extensive supply, adequate in all respects to its necessities; that every appetite has its characteristic food, stored away somewhere within reasonable reach, and that the mere getting of this supply educates the subject of it; that there are no blunders, nor hiatuses anywhere within the domain of

natural law ; but that where they have been supposed by certain explorers to exist, on closer inspection they have been found to exist in the supposed discoverer ; that all of nature's provisions are on a scale of infinite magnificence and wisdom, all tending to the same grand, purposeful end, the perfection of MAN—the embodiment of nature's best elements ; that her entire operations proceed with marked uniformity and exactness ; that they are all friendly to every order of being created ; that the whole animate and inanimate world are planned, the one for the accommodation of the other ; and that these again are all designed to administer to the higher intellectual, moral, and physical wants of MAN, we only declare that order and design reign everywhere in all departments of the universe, from the grand sweep of worlds and systems through space to the almost imperceptible quiver of the minutest atom that floats in the life-cell of a plant or an animal.

II. This order and this design manifest themselves in a marked degree in the growth and maturing of the higher order of beings, commencing with the lowest order of plants and animals and culminating in man, the highest order of animals. Each higher order is nourished and sustained by those mediately below it, all merging into and aiding in the perfection of the highest. This law covers what we sometimes call “natural selection” and “the survival of the fittest.”

III. The growth, development and perfection of all these orders in common are regulated by forces operating strictly in obedience to a law inflexible in its behests ; so that the infringement or neglect of the requirements of this law is followed by corresponding defects in the growth and maturity of the subject of it ; while, on the other hand, obedience to these requirements, even in the minutest detail, is as certainly followed by the healthiest growth and highest development of the subject of it.

This is observed in the careful cultivation and growth of all plants and animals, and the law is certainly not less binding in the education and growth of man, where and in whom all these antecedent forces center and culminate. The world to-day in all its beauty—and not less in its deformity, morally, phys-



ically, and intellectually—is just what the operation of these forces have made it. And the most encouraging thing about all this is that these forces are subject to man's direction and control. God has thus, wisely, we think, put our education into our own hands. Angels would probably make poor teachers. They would scarcely be able to make due allowances for all our weaknesses and dullness, to say nothing about our meanness; and we certainly do not want those *other fellows down there* to be meddling with our affairs, however much they may have had to do with upsetting things in the past. Man must educate himself, for self-made men are the only real, manly men we have nowadays. And the life work set for him in natural environment will do this in every case if it be properly disposed. Hence his school life and work should be an epitome of his world life.

IV. There is a natural and necessary connection between the subject of growth, or education, and the occasion of it, or the forces that nourish it and minister to it. That connection broken, or the proper forces ignored, and disorder and failure ensue. From this result or penalty there is no escape. Any plan or system, therefore, for the education of man, in order to secure the best results, must conform to this order of growth. Instead, therefore, of putting the child upon the mere search of knowledge, through which he is supposed to secure this development, though in a haphazard or unnatural way, or through purely artificial channels, as charts and books of instruction,—generally bad imitations of nature at best, however skillful these devices may be,—he must fail just to the extent of the violation of this law. Experience proves this to be true; whereas, if he is made the recipient of truth through lawful channels, his improvement is correspondingly great, and his chances for success in life made more certain.

The object should be, therefore, in commencing a course of instruction and training for the child, to introduce him, at once and directly, to good environment, to whatever new things there may be in store for him in that environment, to the *real things* themselves, as far as possible, and not to their mere representatives, as pictures even, or words; not even their names

at first, or until *asked for*, so as to allow first impressions to deepen and to become strong and as accurate as possible, the percipience vivid and the concept formed, in part at least; whereupon the *name* becomes a necessity for designation and for differentiation, and the transfer from object to name, from the real to the ideal, is most readily made from concept to name. But there must be no haste. Nature has a thousand ways of indicating her want. "Ask and ye shall receive" is the law of God and nature, and no wiser or more benevolent provision ever existed. Hence the child must *ask*, or indicate in some way, his want; then give the name, the word. It calls to mind the object or the act or the number, quality, etc., ever after. The *word* is then his talisman. With it he conjures ideas and thoughts. With it he builds his monuments. With it he casts out demons—he *talks*. Nature demands it as surely as she does the blooming of the plant when baptized by dews and showers and sunshine. Language is the efflorescence of thought, and nature's laws are inflexible.

Thus the beautiful and necessary connection between the child and nature is kept unbroken, and may be thus maintained throughout the entire course; varied, to be sure, both in kind and degree, to all the conditions of age and advancement. The true education of man consists in most part in his mastery of nature. Nature becomes both his servant and sovereign. He rules and is ruled by her. He conquers her difficult problems, and mounts to the throne of his sovereignty as he gathers strength by struggle with these problems. Nature brings this compensation to all her votaries. She crowns him who carries her heaviest burdens and delves deepest into her hidden mines.

V. This close communion with nature reveals the important fact that the child's natural growth in knowledge and ability does not proceed in separate and independent lines, requiring separate exercises or studies for each; but commencing as from an initial point—a unit or *self*—it proceeds thus from within, outwards in all directions in about the same ratio; each line of thought, as for instance in a knowledge of color, form, place, distance, number, quality, etc., merging into and blending with each other, thus aiding and strengthening one another in force,

clearness and distinctness of impression, and consequently of thought expression when language is called into requisition. This may be continued up to the third, fourth, fifth, sixth, and even seventh year of the child's age, with such changes and additions of natural and artificial objects as the child want may require.

Every schoolhouse, therefore, should be a cabinet of curiosities and common things. Better still, every school should be a home,—a common *home*, with all the sympathies of the real home. It should be a little *world* where life and its activities and industries, its amusements and amenities, its opportunities and experiences, all conspire to lift the child into real life and love. The schoolroom should not be a *pen* wherein we are wont to keep cattle and sheep. Every schoolhouse should have attached, at least a quarter section of good land, some even more. “But what about our towns and cities?” They must also be expanded in a similar manner—the public domain is large enough. The children must have room to grow as God intended they should, and the towns and the cities must take care of themselves, must “move on.” Health, happiness, future prosperity, morality, and religion, all demand these onward movements; and though the idea may appear extravagant now, to many of us, yet it or its equivalent will surely come to pass, for the demands of this age are imperative.

VI. But educative forces move in natural channels; and, if uninterrupted, they move in all directions outward from the initial center in about the same ratio, and not in fits and starts, or in one direction at a time, though there may be concentrated intensity of thought, feeling and will at certain points. But sound growth is always symmetrical, as in the growth of plants and trees. Hence a text-book or guide that covers one of these characteristic lines,—as color work, form work, or language work, number work, and the like,—and follows the direct order of nature, or “natural selection,” must necessarily cover all the others more effectually in all respects, in order to maintain unity and symmetry, than is even possible by attempting to follow one to the exclusion of all others, or even a part of them, since each one requires the aid of all the others in order to make the circle complete and effectual as an educative force;

*i. e.*, to learn language well, as an expressive art, for instance, the child necessarily learns color work, form work, number work, etc., to aid his thought (and hence his language), and thereby learns the language better than he possibly can learn it by merely conning words and sentences set him by some stupid author without the necessary original thought (the best and most necessary part of the study) connected with and inseparable from the proper study of language.

Here then is an actual saving, not only of a multitude of—to him—meaningless books to perplex him with, but of more than one half the required time, with the added strength and accuracy of thought and expression which can never be secured by separating these naturally inseparable subjects. This will give the needed time for other industries so much needed in our courses. *Let there be but one book* and one series of lessons for each educational period (which is measured only by completeness of thought and expression) covering all these subjects in each lesson in such measure as shall make them mutually helpful up to the seventh or even tenth years of age; *and this book should be largely self-made.*

This may be hard on school-book publishers; but I submit, it is better to punish them a little now for their misdeeds in the past, than to continue to punish the children. I consider the *multi-multiplicity* of text-books a hindrance to true education. Too many books are like “too many cooks,” etc.

VII. And lastly, the child in his natural processes of learning is a *creative being*, not a mere receptacle or even a copyist. In this he declares his paternity and his superiority to all other created orders. His impressions, received mainly from contact with the outer world through the senses (the planting process), generate concepts, ideas, and thoughts, as of color, form, place, number, movement, condition, etc., which must need find expression, must be born, else they perish or fade from mental vision, as we find to be the case, too often, in the lessons of the schoolroom; but born or expressed, they grow, increase by natural law, multiply as stock in trade when properly handled, and become to him *a book*. Hence the child, when naturally taught, makes his own *first book*, and he *loves* this book. It is *his* book, *his* thought, and he loves to add to it, to increase

his stock ; and thinking, ever after he gets this start, becomes a pleasure, and not the drudgery we find it in the school falsely taught.

This book may not be a written book at first, but, nevertheless, a *book*—the *logos* of thought—a book he understands—the begotten thought—the remembered *word* that calls up its objects, acts, and qualities—the real language lesson not based upon mere words without thoughts, but a book of his own thoughts and not another's. These thoughts when thus born into word symbols must be cared for. They are the children of legitimate parentage. They are his own. His family pride is appealed to. These children must be nourished and quickened into a body of knowledge—a *book*; and, as said before, it must be his own individual knowledge, bearing his own “image and superscription,” wrought out by his own efforts, aided only by suggestion ; and as he proceeds the *hand* is called to his aid. The *book* must be his handiwork—a creation from hand culture. The hand thus becomes an expressive organ embodying the sense of touch as revealed in after years in painting, sculpture, and other arts. It, like the tongue—the interpreter of oral thought—must early be trained *to tell the truth* in form, in color, size, proportion, and the like, and later on in the written word, the sentence, paragraph, and page. These are some of the first steps in the *child's own book* wrought out scientifically, naturally, in color, form, place, number, quality, uses, language, all in the same lessons, or so much as may be demanded for a certain grade or advancement.

VIII. Now all these conditions, like the embryo oak in the acorn, appear in the same lesson and must be provided for in the same lesson, since the child thought, to be complete, necessarily embraces them all; *i. e.*, he cannot think of one of them, as number, for instance, — for his ideas or concepts are mostly concrete at this point, — without implying many others, as color, place, quality, etc. ; hence they must not at first be separated in thought or practice, or we weaken impression of all, and destroy the unity of thought.

Here then is the key to the true order of thought, which suggests the order of classification of the objects whose conditions and properties invite thought. The first classification should

contain a list of such objects as can most conveniently be used, a collection of which, more or less complete, should be kept on hand in the schoolroom, from which collection selections should be made for class work; each child, as far as possible, being supplied with specimens during recitation, for observing, locating, experimenting, numbering, describing (orally at first); each child giving *first*, the name, *second*, the place, *third*, the number employed: as, this is a pebble, or these are pebbles; here is one pebble in my right hand and one pebble in my left hand; and one pebble and one pebble are two pebbles. The pebble is on my desk; there are two pebbles on my desk and one pebble in my hand; two pebbles in my hand = (put them together) one pebble is white, two are brown (repeat the  $\pm$ ); two pebbles are round, one is flat, rough, smooth, etc.; aggregating and segregating as before, vary the objects in kinds, in number, in qualities, up to any desirable point, but never to weariness. The variations are practically limitless, as anyone may see by practice.

IX. During this practice with objects, things, persons, places, etc., or as soon as the pupil has learned to write fairly well, let the names and number and place of objects be written and read by the pupils, individually and interchangeably, adding qualities and brief histories of some of them in complete sentences, recording them on blank leaves in lesson books prepared for this work. This, with the reading exercises from other sources, with plays and games and manual training, may extend through the first school year, and may be called *The Presentative Period*, or *The Real Object Period*, because objects are the principal sources of knowledge, leading up to what is called *The Representative Period*, or *Pictorial, Symbolic Period*, which ends in *The Rational or Elaborative Period*, each occupying as much time as circumstances may demand.

NOTE I.—These exercises, as here presented, are by no means new or strange. All up-to-date teachers of young children practice them, and many others not shown here, though equally good or better. They commence in the kindergarten, and much earlier in well regulated homes. The object of alluding to them here is simply to show their connection with the "laws of learning and growth." They are legitimate, and hence should not be dispensed with in any grade up to the university, only changed to suit age and advancement. They end only in full-fledged industries of all kinds; and the best thing about them is they *educate* as nothing else will or *can*. They must be recognized to their full extent eventually. Carried to their legitimate limits, and properly associated with other school work, they will put an end to a very large part of the useless contentions that even now threaten the very existence of our social and economic systems.

NOTE II.—These lessons will be followed, in June or September, by one more on "The Mind at Work," indexing all the topics, so that those wishing a guide in the further pursuit of this subject may have one that will be suggestive at least.

## *Music in Elementary Schools*

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NE who has taught music continuously for thirty-three years has obtained ideas about teaching music, to say the least. Whether those ideas are judged valuable or worthless depends upon the judge and what advantages he has had to qualify himself for judging. One who has not had half a hundred pupils to teach, or a class just one hour a week, and has not been responsible for the pupils' adequate preparation in music to enter the high school, has missed one important qualifying experience. If he has learned to read music simply by playing some musical instrument, piano, organ, violin, etc., he cannot understand the difficulties that beset the learner who has no musical instrument except his own voice, which often travesties anything musical.

He may think that everyone should learn as he did, that everyone must necessarily go over essentially the same road. Of course, if he learned to read music by being taught to play an instrument, he had no need of using the syllables, do, re, mi, which he probably calls crutches, because they have to be discarded at last. Since he has never found any need of them in his own experience, he is no judge of their value in aiding others to read music now or during the last century. If he has not met many cases of "arrested development" on account of trusting more to children's memories than to their eyes and reason, he cannot judge of his own blindness, much less of the children's. If he has not worked hard an hour or two every day to develop and keep in good condition his own hands or his own voice, he is no judge of what can be accomplished of any permanent value in training the voice, teaching the rudiments of music, and singing at sight, all in one hour a week. He may claim that music should have a good deal more time; but unless he knows a good deal besides music, has studied many branches of knowledge and their educational values, he

is a most unsafe person to decide what time should be given to music in a general scheme of education.

In fact, no specialist without broad qualifications in other lines should be allowed to plan for a general course of study. He invariably magnifies his own specialty and undervalues other specialties, and may be likened to a school gardener who, by looking constantly at his own bed, invariably gets it out of line with other beds. He should go away from his own bed and look at it over the others, so as to get it in line. The specialist crowds his work as far forward as possible, and for the last quarter of a century every committee of specialists that I have been connected with or read about has laid out work enough in one line to take the whole time of the whole course.

It may seem unreasonable to demand that supervisors of music should be broadly educated if they are to decide how music is to be taught in a general course of study in elementary schools, because music, like art, is long and time is fleeting, and music teachers have about all they can do to qualify themselves in the fine points of their own business without studying educational value and pedagogy—more's the pity.

So we have one cramming primary children with forty or fifty songs a year; or insisting on unmeaning syllables, loo, loo, la, la, etc., as unmeaning spots are used in designing; or calling numbers which cannot be sung continuously, instead of syllables which can be sung continuously; or wrestling for the soul of music by ear, instead of reading the alphabet of music by sight; or soaring on the wings of a transcendental dove, instead of walking on the firm earth; or insisting that every child can sing and likes to sing.

Well, there are diverse gifts, in spite of music teachers. There is music blindness as well as color blindness, and one who has taught music a single year and not discovered it is blind himself, with the probability of remaining so.

But to come down definitely to some of the points suggested. The best use that can be made of one hour a week in musical instruction is to teach pupils to read at sight common music, just as reading at sight is the main object of the reading hour. The reading hour should not be spent in committing pieces to memory and speaking them; neither should the music hour be



spent mainly in committing songs to memory and singing them. Some memory gems are to be taught, but reading books is the main business. Vocal drill, boxing the compass with ip, it, and ik, and oratorical declamations prepared with an unwarrantable and nerve-exciting amount of time happily have been buried, and the ghosts of these things should not be permitted to appear again in the garb of music. Let the children read music as they read books, and let them read and sing with the spirit and understanding also.

Personally I have no doubt that the syllables do, re, mi, used during centuries have been the most efficient means of teaching people who have not had musical instruments to read music quickly and accurately. The intervals in the musical scale can be learned quickly and accurately by their use. A constant and quick succession of intervals can be sung by means of them, while the numbers 1, 2, 3, etc., now coming into use to the great disadvantage of rapid singing, do not lend themselves to speed or continuity. The syllables are thoroughly adapted to the formation of musical tones, open as in the *a* sounds, and closed as in the *e* sounds. The *e* sounds aid naturally in sharpening a tone, and the *a* sounds aid naturally in flattening a tone. Pupils in a whole class who sing certain intervals more and more incorrectly, the longer they sing with the unmeaning syllables loo or oo, are immediately brought back to the true interval by using the regular syllables. For instance, the diminished fifth, from fa to si, or 4 to 7 below, is sung more and more incorrectly with the insignificant syllables, but correctly at once with the significant syllables. This has been tried repeatedly with the pupils of many grades, and always with the same results. So the attempt to supersede a tried and certain means with an untried and uncertain means is of doubtful benefit. The singer who has no musical instrument to play needs them if the instrument player does not.

Some music teachers who learned to read music by playing an instrument are the strongest advocates of a piano in every class room. Having induced dependence by the use of the piano, they straightway make the dependence or inability of the children an excuse for the use of the piano.

In all lines of school work cases of "arrested development"

have been produced by improper methods, the very worst being the overloading of the memory with indigestible information. Teachers who have learned by experience that the stomach cannot be abused with impunity, evidently believe that the memory cannot be abused by crowding into it any amount of facts good enough in themselves. Because pupils do not writhe in pain or give any outward manifestation of mental dyspepsia caused by the imposition of mental food improper in kind and amount, that should not lead any teacher or director to decide that no harm has been done to their minds. Mental dyspepsia is shown often by a distaste for a study, which too frequently is ascribed to laziness, natural inaptitude, or erroneous ideas concerning studies.

To ignore interest and employ compulsion in physical exercises, for instance; to insist on an overwhelming number of motives, as in the present experimental method of teaching design; to overload the memory with songs only partly learned, as regards words and correct intonation, as in the present musical work in our lower grammar and primary grades, are recent instances of flagrant violations of pedagogical principles. This naturally results from a study of music or any other subject by itself without regard to the laws of mental growth. The main trouble with all school instruction is that teachers study subjects so much that they have no time to study children, children's minds, and the current of their lives.

Very often the girl taking lessons on the piano reaches a point where she makes no progress. She catches tunes very quickly; she uses her ears so much that it is easier for her to use them than her eyes. Unless the course of her work is very carefully watched she will rely entirely on her ears; and if her teacher is so unobservant as to play over her piece to give her the swing and soul of it, she will play it by ear, and refuse to read it as often as possible. The pupil will take the path of least resistance for the time being, and put up barriers to any greater proficiency. Many a girl has had to give up her musical instruction because her ear habits overcame her power to see and read music intelligently.

This exceedingly bad habit is fostered in the public school and the Sunday school. The public school is the greater

offender, because the teachers are expected to teach good habits, and to note any aberrancy at once. But the mischief lies in concentrating all the attention on the music and none on pupils' bad habits of work, perhaps induced by a special director. Neither the number in the class nor the lack of time, nor both together, are any excuse for not requiring pupils to use their eyes and reason.

A little girl in one of my first grades apparently could read her school reader through from beginning to end; but, paradoxical as it may seem, she could not read a word. Her ears were so exceedingly quick that she learned every story exactly by hearing other children read it. Each story had a picture at the beginning. She associated each picture with the story that belonged to it, showing that her sight and judgment were also excellent; but she took the wrong tack unnoticed by her teacher, who was better than the average. Her mother discovered that she could not read at all, but her excellent memory and association of ideas had blinded her teacher to the error of her ways. Then the work had to be done over with greater labor than would have sufficed in the beginning. That girl is a teacher now and is on her guard.

Pupils of her quick-eared kind range all the way from A to Z; and yet they are taught as if their memories and mental habits were exactly alike and needed no attention. At all events memories are crammed with songs, and ear service is required to such a degree that it is safe to say that the teachers see no possible danger in song cramming, that there is no danger in ear service to any extent.

The main difficulty with the choirs that I have had charge of was their inability to read music of a simple kind at sight. They frequently contained members with fine voices who did not know the few simple things required to start right; they required much drilling. Constant repetition of the tones on the organ enabled them to memorize the tunes or parts, because they could not use their eyes as effectively as their ears. That is the story I hear from most choir masters to-day, and the remedy seems to be sought in the public schools in more ear service and less eye service, more groping and less certainty, and more premature struggling for the fine flower of music

before the stalwart stalk has been raised. Hothouse processes produce only hothouse results. Stamina is wanting.

As to cultivating the voices of children in public schools the notion is Utopian. The children can be told to sing softly and to imitate certain tones given them, but that is not cultivating the voice in any permanent or telling way. Only a teacher thoroughly acquainted with the vocal apparatus can do that or should be permitted to do it. Many voices have been ruined by vocal teachers in this and every other city. To cultivate the voice properly individual instruction, suited to each case, and much vocal practice are indispensable. Two hours a day are needed to put the vocal organs in proper condition for proper singing, and then daily practice is necessary to keep the voice in good condition. To imagine that anything of much account can be done in cultivating the voice in one hour a week, besides attending to the rudiments of music and sight singing, in classes of fifty pupils each, is a pleasant dream that cannot be expected to materialize.

Besides, if considerable could be done in that line, the first natural shriek of a pupil at recess would undo a large amount of vocal practice of the singing sort. Professional singers are very careful of their voices and never shriek. The children have many opportunities during the week at play to use the natural voice in anything but the conventional singing style and they improve them, and should be permitted to do so as lively and healthy young people, vocal instruction to the contrary notwithstanding. There will be time enough for vocal work of a professional order when the changing voices are settled, when the few whose voices are worth cultivating are discovered. To do it before is premature; but that is a very common characteristic of the experimental work now in partial possession of the musical field of instruction.

The surprising thing about our musical instruction, as well as every other kind in charge of special teachers, is that it can be carried on without any supervision on the part of those who are supposed to understand the principles and application of psychology and pedagogy—supervisors, superintendents, directors, or whatever name they may bear.

Very rarely have I met a director of music, drawing, design-

ing, physical or manual training, or elementary science, who has made a special study of children themselves, or their dominant characteristics, for the purpose of getting the right point of view to start with, or a special study of pedagogy, psychology, and in short any of those subjects that tend strongly to ensure correct methods of instruction. How, then, can they, dealing mostly with the minute and systematic phases of their own extensive subjects, help going wrong in their instruction? It seems to be taken for granted that a specialist not only knows his subject thoroughly, but children, pedagogy, and psychology as well. This is the rock on which we split.

This, more than any other single thing, has impeded the progress of all the more modern and controversial subjects such as music, drawing, elementary science, physical exercise, and manual training. Everyone seems to be at sea in regard to applying pedagogical principles to those studies. If a teacher of any one of those subjects appears to understand it, there seems to be no question whatever about his ability to teach it correctly; and so he is left year after year absolutely with no supervision to try this and that experiment, and to err in this direction and that. This is the status of our musical instruction.

If there is anyone in authority who understands psychology and pedagogy and their practical application, he should see that they are applied in new subjects as well as in the old, in the subjects which he does not understand as well as in those which he does. They should be of universal application to warrant the attention given to them in college professorships, and, above all, for the best interests of school children.

In the report of the Conference on Music in Public Education, published in the Boston Transcript, March 16, 1904, are many interesting statements and claims, such as, "With the growth of a just and comprehensive idea of education, the claim of music to an equal place with other leading subjects in the secondary schools is becoming more general." "In this, as in other leading subjects, a teacher should have thorough knowledge of the subject taught; in addition thereto, an academic degree, or its equivalent in teaching experience."

This shows the estimation in which musicians hold music in a general scheme of education. The advocates of temperance

instruction, drawing, manual training, physical training, and perhaps science hold similar views about their own subjects. If they all had their way, what would become of the helpless pupils and their struggling teachers?

In none of their reports do I find much stress, if any at all, laid on pedagogical instruction, the right point of view, or any consideration of the physical and mental endurance of the common teachers and their pupils. Educational values, a just proportion of time and conditions for agreeable teaching and learning, are seldom even mentioned in their conferences, either through inadvertence, which seems hardly possible, or self-sufficiency. But music directors err no oftener than directors (expert?) of some other studies.

A just judge will not accept the smallest present from one who may possibly be brought before him for judgment. His personal likes must not influence his judgment.

Personally I have been deeply interested and actively engaged in music half a century; but that must not prevent me from rendering justice to every subject of school instruction that comes before me. I must remember that laws and customs have limited public school instruction to five hours a day, five days in a week, forty weeks, more or less, in a year; that a just amount of that time has been allotted to each study by those who have made a study of educational values and who may be called the supreme judicial court; that I must see to it that the many children entrusted to my care are protected in all their educational rights, for their own sakes, not for my personal benefit. So I must hold judicial views of the frequently intemperate advocacy, by special pleaders, of subjects studied from only one side, or from motives of personal interest.

The judicial courts have set a very instructive example in the frequent issuance of injunctions against attempts to violate business principles on the part of those who will look at only one side of a disputed question, mainly for selfish reasons. It is high time that the educational courts began to issue injunctions against continual violations of educational principles on the part of those who have studied only one side of the business of education, and that the side far more to their own personal advantage than to that of the great mass of the children under instruction in the elementary schools.

## *The Passing of the Spelling Book*

ALICE RANLETT, AUBURNDALE, MASS.



HE spelling book is no more ; in schools conducted in accordance with advanced pedagogic methods it has disappeared, swallowed up, as it were, in the "glittering generality" named "English." Possibly in secluded hamlets yet uninvaded by the kindergarten principle of learning through play, where children still amuse themselves by games of their own choosing, blissfully unconscious of their loss in not being "directed" in their sports, possibly in such secluded nooks, along with an occasional well-sweep and a spinning-wheel owned by a mistress who knows which way to turn it, the spelling book may linger. But in our cities and in schools of modern methods the spelling book has vanished. You may seek in vain the lean, much-thumbed volume in the children's hands ; in vain the spelling class of our fathers' day, standing in line toeing the familiar seam in the floor, hands behind the back, heads up, and brains and vocal organs alertly catching the ponderous words propounded by the teacher, and promptly returning them duly and accurately spelled and syllabified. That was an anxious hour for those too lazy to study the lesson or too dull to learn it, but a strenuous hour of mental athletics full of keen delight to those prepared for the fray, a proud time for him who could hold or win the place of glory "at the head of the class" ; some in later life have mounted to the world's high places of honor with a feebler throb of joyous pride than once thrilled their hearts in district-school days when they "went to the head" of the spelling class.

You may seek in vain for the written spelling lesson by whose aid some of ourselves climbed the steps of the gentle art of orthography. Can any modern school display of crayon landscapes, water-color apples, or even trim sloyd boxes be so goodly a sight as those creamy, ivory-finished tablets of ours as they appeared at the end of the spelling class, containing their forty words of artfully combined letters all neatly written and not one

marked with the black cross of shame which meant wrong? Great was our humiliation at the appearance of these crosses, and great was it also over misspelled words in our compositions, which, while we were yet of tender age, we did not name themes or essays.

Imperfect spelling in those days was the mark of the dullard or ignoramus or the child of other ancestry than ours, whose fathers had never known the spelling book. To us, born from generations of pure-blooded New England forefathers, God-fearing men and themselves of the estate of the spelling book, the misspelling a word was a personal disgrace which was, moreover, an insult to our families.

Who of our generation does not remember the efforts of those of us who were the faithful to make the assurance of our knowledge doubly sure by dress rehearsal before the serious hour of the real struggle? the gathering about some philanthropic mate who would "spell" us, or the standing "in position" at our mother's knee while she rendered the same friendly service, or the passing the occasional examinations given by our fathers? They were inclined to try to puzzle us with such words as phthisic, Popocatepetl, and Nebuchadnezzar,—words which had small terror for us. They were bright and shining marks at which we had long trained our guns; but our teachers well knew the sly and treacherous words which were so elusive that aiming at one we were likely to hit another; those words containing an *i* before an *e* and those others seemingly of the same nature, but mysteriously disposing the *e* before the *i*, and those words which, to us, seemed to choose at their own sweet will whether or not their consonants, in the middle and at the end, should be single or doubled.

But the times have changed, and the spelling book belongs to the ascetic other days, when, as yet, the kindergarten had not risen above its place with young children, and working mightily leavened the whole lump with the principle of "mother plays" and the like. Spelling drill belongs to the simple, stern life of the past, together with other heroic practices, as sewing "over and over" and wood chopping, which, indeed, is still extant in the exercise of prime ministers and presidents who,



moreover, in their youth were braced by the discipline of the spelling book.

If you ask the children of to-day for the spelling book they will answer: "We don't have any; *she* keeps it on her desk."

"And how do you study your lessons?"

"We don't study any lessons; *she* just opens the book and asks us some words, and we spell them if we can."

"And if you cannot?"

"We write them over again."

There is no shame now in misspelling words. In the impersonal, upright, widely spreading handwriting which he who toddles may read, are wondrous variations upon dictionary English which never cease to amaze the instructor in secondary school or college, who has, nevertheless, had much and sad experience. There is no faintest blush of humiliation now on his cheek who sins against the laws of spelling, no pang of regret in his soul.

The teachers in the secondary school, however, feel the shame. They are of a former generation, and snatch golden moments from the all-too-brief algebra and geometry "periods" to struggle with a belated spelling lesson, containing hypothesis, corollary, parallel, and the like. The history and the classical teachers add something to the children's select and limited repertoire of words, and the English teacher, sometimes in schools where English does not remain the same glittering generality which it often is in the grammar school, and where children who cannot analyze a sentence or spell its words are required to write theses upon the philosophy of Wordsworth and the difference in the styles of Dryden and Shakespeare.

Passing through the secondary school the children do pick up stray bits of orthographic learning, but they are turned out no spellers, after all. By no chance lifts and on no "flowery beds of ease" can one be carried to the height of the art of spelling. College examiners bear witness to this as they speak of the astonishing errors in brilliant papers, and merchants who tell us of the rarity of a perfectly spelled letter among the many "in the handwriting of the applicant" sent by high school graduates seeking positions.

Yet, though the spelling book has passed, may we not hope for its return? In these years, when we are enthusiastically adopting many of the good old fashions, may not the fashion of the spelling book "come in" again?

The old designs of glass, plate, china, and furniture are popular; the dignified comfort of colonial architecture is appreciated; and the cheery blaze of the family fireside has become an essential, though it be no more than a gas log in the corner of the "drawing-room" of a toy suite; and, if we are not precisely returning to the religious and social ways of our forefathers, we are taking interest in these, as we show by our pleasant and perhaps profitable plays at being our own ancestors, which take the form of paring, husking, and quilting bees, colonial tea parties, and even spelling matches(1) in which comes often speedy discomfiture to those young persons who are so hardened or so humble as to place themselves in a position sure to bring swift chagrin; the prizes and the glory of these occasions fall generally to the elders whose school days were of the era when the spelling book yet reigned.

There are still those who honor and obey the spelling book and esteem the results of its training, who mourn the present unblushing defiance of its laws and regard misspelled words a blot on the scutcheon of culture and education. There are many not too stern parents who look with disfavor on some of the modern methods by which children are supposed to learn without knowing that they are learning and without knowing what they are learning, some suggest, who regard the results of these methods unsatisfactory and who ardently wish to see the spelling book and multiplication table reinstated in their former places of honor.

"There is much talk of children working too hard in school," said one mother; "my children do not have to work hard enough; sometimes, when they have an afternoon of games, story telling, or valentine making, I keep them at home and give them something to do which I think is of more importance for school hours."

"I was a little country girl," said another mother, "and my daughter is a college graduate and a teacher, but she cannot

begin to spell as well as I can ; she often makes mistakes in her letters and she is constantly consulting me as a dictionary."

The present disregard of the spelling book has evidently touched the heart of the writer of a recent article in the *Churchman*. He is reviewing a series of "readers"; these are his words: "The children of the new pedagogy are listless in their attention, and require the constant stimulus of diversion. They have far less ability to read than the older generation, and a pathetic inability to spell. . . . The text in these books meanders through large pictures in long lines and short. By so much as the child is amused he fails to be instructed. These 'readers' are adapted to various modern methods of instruction [these are named]; if *only some 'reader' could be adapted to the spelling book method, we should get better results.*"

Does not this writer propose the one effectual remedy for the "pathetic inability to spell"? We know that the "inability" is not due to any weakness of the children's minds; they are no less able than their parents to learn and obey the laws of orthography; indeed, remembering the teachings of science in the doctrine of the survival of the fittest and evolution, and considering the children's intellectual achievements, we believe that the present generation can do greater things than its elders. We know that the "inability" is not the fault of the teachers, who are far better trained and educated than their predecessors, and at least as faithful and devoted to their profession. In their methods they are simply obedient to the new pedagogy, which places the spelling book on the teacher's desk instead of in the children's hands. Must not our hope for better things rest in the coming again of the spelling book to a recognized place in the course of study and the daily discipline of the schoolroom?

The spelling book does not readily lend itself to the modern method of learning made easy; it can hardly be wreathed with allurements in the shape of games or story telling; it is of another kind; it means work for permanent results, not for temporary recreation. There is about the spelling book a certain atmosphere of "plain living and high thinking," and of that stern morality which does right for right's sake.

The wise and thoughtful are warning us, in these days of the

republic, of the dangers of luxury, extravagance, and self-indulgence, and bidding us remember the downfall of Rome, and return in time to a simpler, sterner living. Might not the coming again of the spelling book, with its fine tonic air as of "freedom's northern breeze," blowing upon the languorous, tropical atmosphere which often pervades our schools, brace the systems of the children, and rouse them to vigorous action which would strengthen mental and moral nerves and sinews, and help make of us a hardy, enduring race of a fibre like that of the Fathers of the Republic?

### *Song of the Earth-born*

A star amid the concourse of the stars,  
Ringing its golden word into the rhyme  
That syllables creation! Reel of Time—  
Unwinding still thy spiral thread of light  
Along the Past's deep night!  
Where dost thou bear us in thine endless flight?  
O voyager upon space's mighty sea,  
Prisoned to one small ship, what word for thee?  
What wonderful adventures shall the day  
Reveal to thee, beyond the gleaming bars  
Of constellations lying in thy way?  
What glorious station  
Telegraphs thy flying craft make no delay?  
Millions of feet have left thy beaten roadway  
For—where, O Earth?  
Do spirits find an older, nobler nation  
Through Death's new birth?  
Before, behind us mystery assaileth.  
No backward look, no prayer, no tear availeth—  
Right onward to new deeps our strong ship saileth.  
Unworthy son of Life—the soul that quailleth!

HELEN CARY CHADWICK.

MALDEN, MASS.

## *Education in Porto Rico*

A. W. MARVIN, B. PED., PRINCIPAL HIGH AND GRADED SCHOOL, MAYAGUEZ, P. R.

“NOWLEDGE is power.” I prefer to say education is power. However, the truthfulness of that old proverb has never been successfully disputed. On the other hand, it follows that the lack of it is a mark of manifest weakness. For a practical application one has but to review the past four centuries of Porto Rican educational history.

If after four hundred years of organized government no code of laws establishing a common school system can be found, and but poorly equipped schools of any sort were in evidence, then it must of necessity follow that either the old proverb is incorrect or else the general population is illiterate to the last degree for one claiming for itself the honors of civilization. As a matter of fact, about eighty per cent of the Porto Rican population could neither read nor write at the time the island became a possession of the United States. Ignorance during all that period was of the densest description, except in the case of the favored few.

It is not with the spirit of ridicule that I write thus, but rather out of sympathy for the benighted masses whose opportunities have been so extremely limited. Since all history is to a greater or less degree but the natural sequence of cause and effect, let us note first the causes which have conspired, as time has been passing, to keep Porto Rico's educational status so very low; second, who the favored few were; and third, what is being accomplished since the American advent in 1898.

In the first place, the original population of the island was made up of Indians of a purely savage nature, to which unfortunate class were fastened the galling fetters of slavery, which resulted in greatly decimating their numbers. As time went on another product, commonly designated as half breeds, came into existence. These mixed breeds formed a contingent higher in the intellectual scale than the original Porto Rican Indian, but at the same time inferior to the Spaniards, by and with whom the cross had been formed.

About the middle of the eighteenth century negro slavery was introduced into the island by the Spanish, which has resulted in

another amalgamation of blood and the consequent production of another and practically distinct race of people, who for the lack of a better term are styled mulattoes. This constitutes the peon class, or those who were formerly slaves. With the passing centuries of tropical heat to enervate, and the bounteous hand of nature to provide, with very little effort, for the bare necessities, together with the oppression of Spanish task masters and extortionists, it is not the most difficult matter to conceive of what conditions might be expected to exist in the line of physical energy and moral and mental ideals among this people at the time of the American occupation.

The government up to that time may be said to have had practically no public school system. The main educational advantages which existed were of two kinds: The first and by far the most important were the parochial schools under the direction of the priesthood. In connection with these institutions there had been established from time to time libraries which likewise were strictly sectarian, and illy adapted to the masses. They were consequently little patronized in general, and have for the most part fallen into a state of decay, and at the present time represent little else than rubbish.

The only other means of encouraging educational tendencies was by the licensing of some needy person to conduct a sort of private school in his own home. This I presume was done more with the view of supplying such persons with the necessities of life than the furtherance of educational interests. In such cases very little interest was manifested by the teacher either in the pupils' needs or in his own professional qualifications. The only requisite was the permission or license granted by either the governor of the island or the *alcaldia* of the town in which the teacher lived or desired to teach.

There were, as I have previously stated, a favored few who were to a greater or less degree the representatives of the Spanish government, and as such were merciless in extorting from the subordinated classes as much treasure as possible, and neither were they always honorable in the means thus employed. It was the sons of such as these who had the opportunity to pursue their studies in European institutions of learning. I may add also that in nearly all instances such have been of pure Castilian

or Spanish descent, and had very little interest in the affairs of the island generally except wherein it was to their private interest. It is this class who to-day, with few exceptions, represent the best intelligence on the island, but who are most likely to curse the United States Government since the change has deprived them of government favoritism.

Such was the condition of affairs when the American government assumed control. Actuated by the true spirit of progress she is endeavoring to assist this prostrate people to a higher standard of living by establishing among other reforms a well-organized common school system. It is the aim as far as possible to have this accomplished by the people of Porto Rico themselves, Americanizing the whole work by having it directed by a Commissioner of Education appointed over the island by the President of the United States. It is evident that the Porto Rican people will evince more interest in all reforms if they are the product of their own labors.

The work thus far is giving evidence of success and constant advancement. Enthusiasm is manifested on all sides. Schools are being established in all parts of the island. While approximately 1,209 school buildings have been equipped and 62,000 children are at present receiving instruction, nearly 80 per cent of the children of school age have as yet not been reached, but the good work is going on.

Under the last year of Spanish rule there were but 539 schools, as statistics in the public records show. As to the precocity of the Porto Rican children, I have simply to say that it is all that can be expected, while the energy put forth by those who are old enough to know and realize the necessity of an education is more than gratifying. As concerning a class, the problem of school government is not a matter of as much anxiety as in some parts of the States. As a matter of fact, the Porto Rican boy or girl never forgets his manners.

Is it too much to believe that in due season we may see the educational standard of this little island sufficiently adequate to place it on an equal basis with any of the States of the Union,—a source of pride to the nation to which it belongs?

Its power for future usefulness lies in the education of its rising generation. Let us hope the best for its future.

*Editorial*

**T**HROUGHOUT the land, especially in cities, there is great activity in the critical revision and re-organization of school courses. The new conclusions of psychology, the developments of sociology, and an awakening civic and economic interest, have brought about a public and professional alertness to the influences of education that is encouraging. What is it in education that makes it worth while to the average man, the small tradesman, the mechanic, the wage earner, the farmer, the clerk? What can the school do to make each a better citizen? And along with the question goes the conviction that what it can do, it should do. Do the changed conditions in civic life, within a generation even, make necessary important changes in the school training? The matter and sequence of school exercises are both in question.

**P**RIMARILY there is a new emphasis put upon "doing" as against mere knowing. This is not regarded as less important, but that, more. Not less honor is accorded to scholarship, rich and varied according to the age of the learner; a mind stored with ideas of truth, and pictures of beauty, and ideals of right and a comely life. But there is growing a feeling, if not yet a conviction, that there is no special virtue in the possession of knowledge. Men have been educated by what they have done, not by what they have known: or by what they have used of what they have known; by the life they have lived; by their struggle to reach their ideals; by their practice of maxims of behavior. There is, however, no special virtue in mere hand doing, manual training, and making things. The doing must be thoughtful and purposed. And the current revision of courses of study is recognizing this element. Drawing and manual training teachers are co-operating in a helpful way. Both are more generally regarded as means of expression, and not as independent branches of study. History and literature and science, geography especially, and customs and the industries, are made both more practical, more vital in their human relations because of this conception, and at the same time more educative.

**T**HERE is also included in school exercises more first hand experience, and less of telling. The initiative is being found in the child. The teaching stimulates and furnishes opportunities for interest, and gives right direction; but the originating activity must be.



with the pupil. What the child sees educates him, not what his teacher sees; what the child practices, or plans, or enjoys, or resists, not the teacher's doing, or planning, or enjoyment, or resistance. Merely telling is not often educative, either in the college or the elementary school. In both the work is becoming more real. The laboratory supplements the kindergarten and the elementary constructive exercises, as means of inducing personal interest and effort. Many school courses now provide for recognizing voluntary work in the lower classes corresponding with original investigation in the higher institutions. School gardens, and field excursions, and children's leagues, and pupil and student publications, and neighborhood observations of industries and customs, are, in many schools, east and west, north and south, taking the place of formal text-book and classroom lessons and lectures upon like subjects.

AS a third, and last, though by no means least important of the ideas underlying current movements for readjusting school courses, should be mentioned the disposition to exalt the fixing of conduct, and the less exclusive sharpening of the understanding. The occasional or frequent efforts in recent years, and the recent attempt in New York State, to introduce some positively effective plan for affording moral guidance, have resulted in little direct good. But in an indirect way, schools have been influenced to respect the finer moral atmosphere, and the value of a habit of right behavior, and the importance of having in the school teacher a safe and elevating moral influence that is a distinct gain. Discipline by the teacher has been immensely softened and deportment of pupils correspondingly improved. Instances of severity by the former, and of rowdiness by the latter, are relatively few, and generally condemned. In the aggregate, the spirit of the school is distinctly ethical, despite the occasional lapses. The attempt to substitute wisdom for mere knowledge is often crude, and the results are often meager; but there is the attempt, and the movement through teachers, and their co-operation with parents in education and other lay societies, is very encouraging.

A SUCCESSFUL merchant and large dealer in hardware was asked, "What are the qualities that make a successful salesman for your goods?" He replied: "(1) Knowledge of the goods, (2) a real interest in the man who buys, (3) an unfailing good nature, and (4) absolute truth and honesty." The schools have long emphasized the first, in the teacher,—a precise and comprehensive acquaintance with this culture, this initiative and interest in the best things, with

which the pupil is to be endowed. Current educational theory, and, in a measure, educational practice, have exalted the importance of the other three qualities,—a real interest in the child, unfailing kindness and fairness, and absolute truth and honesty in dealing with the young. Something of improvement may be seen in the school prescriptions; more, in the qualities of mind and heart demanded of the teacher.

WE have previously set forth in this department of EDUCATION the fundamental importance of LOVE, and of AUTHORITY, in the relations of parents to children in the ideal home. We now name SYMPATHY as a third fundamental. By sympathy we mean something quite different from love, though love is beneath it as its ground and source. Love is the great, abiding, all-pervading sentiment of the parental mind, wherein the child finds the very reason of his existence and which is pledged by a Divine law to care for him in all his needs until he himself becomes finally an independent, adult being. By sympathy we mean the particular manifestation of the parents' love which enables the mother or the father to take the child's point of view and see things as the child sees them. This is essential to the highest ideal of home life. For only thus can the best solution be found of many perplexing problems and the most favorable conditions furnished for the child's symmetrical development. Sympathy, as here defined, is one of the best proofs of real love; and it will greatly modify and finally dispense with the exercise of authority in the home. It will guide the child in right directions and help him in acquiring an ability to form true, independent judgments. It will save parents from grave mistakes into which too many easily fall. It will greatly simplify and strengthen the relations of parents and their children and improve the social and moral atmosphere of the home. Let us note two or three illustrative examples.

A very young child has a lot of undeveloped nerves and muscles. It is necessary for him to develop and get control of them by almost incessant exercise and effort. It is essential to his physical, not to say moral, welfare that he shall tumble about a good deal in the dirt, wriggle, run, jump and roll in a way quite shocking to sober, dignified adult nerves and notions. But the wise mother takes the child's point of view and provides properly for these requirements of infantile humanity. She is not so cruel as to require him to sit still and always be perfectly clean. As time goes on other necessities assert themselves. The infant turns into a lusty boy and craves companion-

ship with other boys. Every normal child needs comrades of his own age, for which adult associates are no substitute. Some parents make a great mistake here. They require their child to stay at home and do not allow him to mingle with other boys and girls for fear of various contaminating influences. The result is an abnormal, old-fashioned, bashful, awkward or weak and effeminate youth, who feels throughout his whole lifetime the handicap of his unwise bringing up. Again, there comes a time in a young person's life when he begins to feel the attraction of those of opposite sex. In this critical time, so fraught with possibilities of good or evil, how important, how indispensable is a little genuine, tactful, loving parental sympathy! How unfortunate it is that there are so many boys and girls who will go to almost anyone rather than to their father or mother for sympathy and advice in such a time! In the minor questions of daily conduct, and in the larger matters affecting life-conditions and perhaps eternal destinies, there is a call in the home for the constant exercise of this rare and beautiful quality of human sympathy,—the power to put one's self in another's place. Its cultivation in the parental relation will lead to its exercise in the wider spheres of social and civic life. To be a good father or mother is almost equivalent to being a good neighbor and a good citizen. Nothing will contribute more to make home happy than this sympathetic, thoughtful, unselfish attitude of the older toward the younger members of the family circle. And such an educative force in the home will develop a sense of responsibility, a facility in forming judgments, and an all-round manliness that will prepare the youth of such homes in their turn for high-grade citizenship. Therefore we name sympathy in the catalogue of fundamentals of a true, ideal home life.



*Foreign Notes*

## INDUSTRIAL EDUCATION IN EUROPE

PRINCIPAL ARTHUR MARVIN, SCHENECTADY, N. Y.

All the phases of education that have been developed through the experience and thought of the race may be reduced to two main types—the culture, or humane type, and the industrial, or professional type. In the United States the former type has engaged the attention of educators up to the present time, almost to the exclusion of the latter, although there are a few schools in this country which may be classed as industrial. In Europe, on the other hand, industrial education has been developed to a marked degree.

Technical education in Italy during the last few years has made rapid and praiseworthy progress. In 1880 the government appointed a commission to study thoroughly this question. Its report was to the effect that Italy's future as a manufacturing country depended upon the skill and intelligence of her working classes, and that nothing could more effectively further the interests of the country in a national sense, or raise the general condition of the people, than a broad and liberal support of industrial education on the part of the State. At the present time a system of industrial schools extends all over that country.

Industrial schools in Holland educate skillful and practical workmen for the different trades. Instruction is divided into three departments—elementary, theoretical, and practical. In the elementary department instruction is given in reading, writing, arithmetic, history of the Netherlands, and geography. The workshops of some of these schools have been developed to such an extent that in the metal working branch, for instance, engines driven by steam and electricity have been set up wherever practicable. The school authorities are permitted by the State to purchase the necessary wood, iron, steel, nails, stone, copper, metals, colors, coal, glass, etc., for the use of the students. A great many tools for the hand trades are manufactured every year.

Much has been done for technical education in Russia. Technical schools with advanced curricula have been founded

in Moscow, St. Petersburg, Riga, and in other cities of the empire. Instruction in this class of schools is thorough, and in no country, with the exception of Holland and Germany, is the system of practical demonstration better developed than in Russia. The schools, for the most part, are connected with large factories, where the student receives wages for the work actually performed, the same as a common laborer. During the hours devoted to such practical instruction, the student assists in manufacturing motors, pumps, boilers, tools, etc. In many factories it is the custom to permit the student to act temporarily as foreman or manager of some department after he has passed through the prescribed course of theoretical and practical training.

Industrial education in Sweden and Norway is chiefly connected with the public school system, and there is scarcely a town, large or small, which is not supplied in this respect. In many of the country districts evening classes have been arranged for the purpose of giving instruction to young men and women in sewing, spinning, and weaving. In a number of cities elementary technical schools have been founded, which prepare students to enter the royal technical institutes in Stockholm and Gothenburg. The elementary school in Boras is intended especially for weavers, and has a workshop fitted up for practical instruction. The evening preparatory school in Eskilstuna trains young men to work with iron and steel, while those in Filipstad and Falun are preparatory schools of mining.

There are in Austria between four hundred and five hundred industrial schools of all classes and grades. Numerous special schools for weaving, wood carving, basketry, and for practical instruction in making firearms, machinery, glass, watches, clocks, etc., have also been established. Technical education in Austria may be divided into six classes, as follows: (1) The technical university; (2) State industrial trade schools; (3) industrial art schools; (4) special industrial schools, with workshops; (5) primary industrial school classes, where instruction is given evenings and on Sunday; (6) technical trade museums, in connection with which instruction is given.

The hours devoted to practical and theoretical instruction in the industrial weaving schools of Switzerland usually number

ten each day. During the forenoon, from seven o'clock until twelve o'clock, the pupil is taught how to sort, prepare, thread, mount, and weave. During the afternoon, from two o'clock until seven o'clock, the theory of weaving is taught in detail. For practical instruction many of the schools are supplied with hand weaving machines, while a number of the most important ones have mechanical machinery. The courses of instruction are divided into two parts, theoretical and practical, each course lasting six months. During this time the students manufacture large quantities of handkerchiefs, napkins, and ordinary cloth. During the latter part of the course they are thoroughly instructed in the art of weaving damask, ordinary piqué or double piqué. The pupils in every case are so grounded in the technicalities of weaving that they step from the school to the factory, and from the spindles of the factory there is nothing to prevent those gifted with exceptional skill from rising to positions of managers.

Technical education has been the subject of much attention in France. In addition to the technical universities and technical schools for roads, bridges, mines, and civil engineers, there are industrial art and trade schools for textiles, tobacco, powder, clocks, gloves, porcelain, and every other article of manufacture in France which has claims to any importance. There are many industrial schools in France which are worthy of special attention. This is true of the one in Cluses, Savoy, which was established in 1863 for the clock and watch industry. It admits pupils between the ages of fourteen and twenty, but every candidate must have a good elementary education. The aim of the school is to train practical workmen for the watch and clock industry of that district. There is also an advanced course for those who wish to become manufacturers in this branch.

These foreign examples must have significance for us. We are richer in natural resources than any of them, but we have not kept pace with other countries in fostering our home industries. We have imported the articles of taste and luxury and imported the skilled laborers, relying on our vast product of raw material to give us the balance of trade; and so it has. Education is a means to an end, and only as a means to an end does it pertain to the State. Let the State see to it that the right kind of education is provided for its great army of workers; let the State suppress idleness as it does ignorance; let it provide trade schools rather than workhouses and prisons, and this country will make such advances in the arts and sciences, such strides toward a higher order of material prosperity, as some of us have never dreamed of.

## *Book Notices*

**NOTE.**—The number of books now published monthly is so large that we shall hereafter adopt the plan of promptly acknowledging by title, author, publisher (and price when we have it) all books sent us for review; and later, as space is available, give more extended notice to such as seem most likely to be of interest and value to our readers.—PUBLISHERS EDUCATION.

**Symbol-Psychology.** By Rev. Adolph Roeder. Harper & Brothers, New York. This grand book marks the beginning of a new epoch in Christian thought. It shows that the historic legend, fairy tale, and myth are phases of the story of the human soul, which in the Bible we have entire. Romulus and Remus, Castor and Pollux, Cain and Abel are the struggle between the higher and the lower in one's nature. The Neibelungen Ring, the Holy Grail, the Ark of the Covenant, and other life tokens, are the divine at the center of our being, guarded vigilantly from harm, and sought for by the soul in its struggle upward and finally possessed. And similarly others have their inner meanings. The unity of the race is remarkably set forth here, in the revealing that all ages and peoples have always been in possession of some form of the fundamental truths.

**Talks to Students on the Art of Study.** By Frank Cramer. This is a sensible contribution to the psychology and philosophy of the art of study by one who has made a deep inquiry into the realms of the subject and thought soberly and honestly. There is no claim to originality in the setting forth of the themes, but there is much in the matter and manner that is essentially the author's. To the student it will prove to be a substantial benefit if he will read the book with receptive mind and take its suggestions in the spirit they are given. San Francisco: The Hoffman-Edwards Company.

**Masterpieces of Latin Literature.** Edited by Gordon Jennings Laing. This is another of the famous masterpieces series issued by the publishers, volumes that are most valuable to possess, being whole libraries in themselves. The present number contains masterpieces from Terence, Lucretius, Catullus, Virgil, Horace, Tibullus, Propertius, Ovid, Petronius, Martial, Juvenal, Cicero, Livy, Cæsar, Tacitus, Pliny and Apuleius. To each author is added an extensive biographical sketch, and abundant notes serve to illuminate the text. It is a most handy book, of greatest worth to the scholar and to the general reader; every school should have copies of it for reference and supplementary reading. Houghton, Mifflin & Co.

**A Geography of Commerce.** By John N. Tilden and Albert Clarke. Not an illustration dots the pages of this work; the authors holding that pictures, to make a book look pretty, are wholly out of place in a geography of commerce. And they are right; the study is of too serious importance, the students pursuing it are too mature to require illuminating cuts, by which the text is made attractive and informing. The authors have attacked their subject with judicial calmness and all fair-mindedness, and have made a work that is substantial and wholesome, replete with information on all commercial conditions and satisfying every demand that the schools may make. It is a book of facts; but these are so presented that the student has but to attempt to learn from it to discover whatever he may need to know in an academic sense. Fullest information on all points have been obtained from the great financial centers of the world; the

latest maps have been inserted, the most authoritative tables included, the latest statistics furnished. The maps are striking features of the book, being new and of a character to afford succinct information on industrial and commercial facts. The study of commerce in the schools will take on new power with this book to aid the student and teacher in its prosecution. Benj. H. Sanborn & Co.

**Outline of a Year's Work in the Kindergarten.** Arranged by Anna W. Devereaux. Miss Devereaux is the Supervisor of Kindergartens in Lowell, Mass., and a practical teacher. The outline is based upon the order of the seasons, and in this the Mother Plays hold an important place, being woven into and adapted to the changes which surround the child and appeal to him. For the two divisions of the kindergarten the gifts and occupations are most carefully explained and worked out and arranged for every day of every week in the school year. It is thus the most practical and helpful of handbooks for kindergartners, a fact most apparent when it is noted that this is the third edition of the Outlines. We do not see how any kindergartner can be without this most serviceable book. Boston: J. L. Hammett Company.

**Famous Assassinations of History.** From Philip of Macedon, 336 B. C. to Alexander of Servia, A. D., 1903. By Francis Johnson. The subject of this book is not a pleasant one, nor is it an honor to humanity that the facts related in the book are facts; but since they do exist they are legitimate materials of history. This volume gives a careful and apparently accurate and impartial account of these great crimes. Each chapter is illustrated with a portrait of the unfortunate victims. A. C. McClurg & Co.

**The Romance of the Civil War.** By Albert Bushnell Hart. This is the fourth volume in the series of Source Readers in American History, a series of greatest interest and importance to every student and teacher of United States History. Within the compass of four hundred pages are given stories and poems relating to the events of the Civil War, ranging from descriptive pieces of life before the war in the South to thrilling selections of field and camp and deck. The selections have been made with wisest care, and they furnish what the student so often needs to make his history comprehensible and graphic. The charge is often made by students that our history is colorless compared with that of the English; Professor Hart's book will serve to dispel this accusation. The book will be a most valuable adjunct to the teacher of American history, and should be on every teacher's desk. The Macmillan Company.

**Some Latin Books.** *Latin Grammar*, by Willtam Gardner Hale and Carl Darling Buck, is the work of specialists, the authors being professors in the University of Chicago. Their book embodies the results of many years of independent study, and presents the facts of the Latin language in their true relations to one another. The field covered by the book is the syntax actually found in high school Latin, all matters that do not occur in high school Latin, or that are rare in the Latin ordinarily read in colleges, having been studiously omitted. Infinite care has been taken to present the true historical development of the language in a way that will best appeal to the intelligence of the young student, that will be most helpful to his memory, and that will give him a sound foundation for possible further study. It is a scholarly work of finest style and clearest expression, and its publication marks a decided epoch in the study of Latin. Ginn & Co. *A First Latin Book*, by Clifford Herschel Moore, of Harvard Uni-



versity; is intended to provide the necessary preparation for the reading of Nepos and Cæsar. To this end eight hundred and fifty words most frequent in Cæsar's Gallic War and Nepos' Lives have been selected to form the main vocabulary of the book; and each word has been used eight times or more in the sentences for translation. The method employed is the one most attractive to the beginner of Latin; he is led by easy steps from the simple and natural order to the involved, and comes out from the study with a large working vocabulary and a power to read Latin that will be his possession for life. The book is an excellent preparatory one for the substantial study in the college course. D. Appleton & Co. *The Tusculan Disputations*, edited by Frank Ernest Rockwood, contains the first book of Cicero's famous work, and the Dream of Scipio. The editor has given a most learned introduction to the disputation; his study of the philosophy of Cicero being a thorough exposition of the subject. The notes are comprehensive and exhaustive. Ginn & Co. *Latin Prose Composition*, by Henry Carr Pearson, is an attempt to combine a thorough and systematic study of the essentials of Latin syntax with abundant practice in translating English into Latin, and to afford constant practice in writing Latin at sight. Most of the English sentences are based on Cæsar's Gallic War, Cicero's Catiline, and Pompey's Military Command. The sentences are carefully graded, with many exercises for general review preparatory to college entrance examinations. It is a thoroughly well made work, and bears the marks of the schoolroom on every page. It will serve well because it has served well. American Book Company. *Cicero De Senectute*, edited by Frank Gardner Moore, is a fine, discriminating edition of Cicero's most famous philosophical essay. The introduction is written with fullest appreciation of the subject, the notes are learned but entirely for the guidance of the student, and therefore within his comprehension and suited to his immediate use. A novel feature is the insertion of Pope Leo XIII's hexameters on "Frugality and the Viridis Senectus," eighty-five lines in all. These fine Latin verses were written by His Holiness in 1897, and were received with marked favor by all scholars. American Book Company. *Sallust's Catiline*, edited by Alfred Gudeman, is marked by two special features: the removal from the notes of all references to grammars and the placing of these references under separate headings in the introduction; a special vocabulary constructed in such a way that the meaning of every word or phrase is given with its appropriate rendering in the order of its occurrence in the text. The introduction is short but lucid, and adapted to the age of the student of Sallust; the notes are full and clear and altogether suggestive. D. Appleton & Co.

**A Synoptic Text-Book of Zoology for Colleges and Schools.** By Arthur Wisswald Weyase, A.M., Ph.D. (Harvard). Text-books on zoology are very apt to be either too inclusive and abstruse, or on the other hand superficial and inaccurate. This comes about from the fact that authors of such books address themselves either to specialists in some one of the zoological branches, or else attempt to make books which are adapted to beginners, and in the effort to be simple and untechnical fail to bring out the relations of the subject to the broader problems of biology. The present book is an attempt to avoid both these dangers. In a large and handsome volume of five hundred and forty-five pages very fully indexed, classified, and illustrated, the whole subject of zoology is presented to the student. We believe that no other book exists which so con-

clusively meets the requirements of both the beginner and the advanced student of the science. The first portion of the volume briefly defines zoology, treats of the phenomena of life in general, shows the relation of protoplasm of the cell, the cell to the tissue, the tissue to the organ, and the organ to the individual, besides giving the fundamental principles of classification. The second portion of the book gives a description of the various animal types. The third portion of the book reviews the general principles of zoology, including the distribution of animals, and an explanation of their habits. The laboratory method and field work are fully provided for. There is something of German thoroughness about the author's work, and we can hardly see how anything further in the line of a text-book on this subject should be needed until the science shall have made substantial advances. The Macmillan Company. Price, \$4.

**A History of American Literature.** By William P. Trent. This is a scholarly work on our American writers prepared by one who is already recognized as an authority in the field of letters. Dr. Trent has contributed much to the cause of American letters, and his critical essays have received the recognition they have so richly deserved. In his latest work he has made all readers and students his debtor, a reading of his book rendering the obligation a substantial and pleasing one. We have not space beyond merely to call attention to the great value of the book and to commend it to all students of American literature. D. Appleton & Co.

**A Latin Grammar.** By George M. Lane. This stupendous work by the lamented Dr. Lane has been thoroughly revised by its editor, Professor Morgan, who has given to it the benefit of his profound scholarship and extensive experience in teaching. We reviewed the work on its initial appearance, according it unqualified praise. It has taken its place as the finest product of American scholarship in Latin and is recognized as the authority on all matters relating to the Latin language and grammar. Dr. Morgan's changes have not been many nor radical but sufficient to remove all errors incident to the first edition, and to add some features, particularly the section relating to Sound. This has been extended from nineteen to thirty-one pages. The book is now a monument of highest scholarship and learning, a work to which all students must go for exhaustive treatment of the grammar of the Latin language. American Book Company.

**Agriculture for Beginners.** By Burkett, Stevens and Hill. This little book is published primarily for the use of pupils in country schools and is intended to give them the rudiments of agriculture in the same way they learn the truths of geography or grammar. It deals with the following topics: the soil and its preparation for planting; the soil and the plant; the plant and its diseases; how to raise a fruit tree, grafting, etc.; orchard, garden and field insects; farm crops, cotton, wheat, corn, tobacco, etc.; domestic animals,—horses, cattle, sheep, swine, poultry; farm dairying, country roads, etc. The authors have discussed these topics in a brief but clear way. The book is full of valuable information. Children from the farm who study it will not only be directly benefited but will have their eyes opened to a hundred facts of nature that otherwise they would not see. So clear and practical are the chapters that it will not only be of use for country children but will be of value also to students of the

new Science of Commerce, generally called Commercial Geography, in the city, as well, and ought to be on the desk of each teacher for reference, as it explains clearly many points of information which cannot otherwise easily be obtained. It would be a pleasure to examine the book if only its form were considered and the excellence of the paper and printing. The illustrations also are very beautiful. In fact we have rarely seen a school book which had so many good illustrations as this book. It is worthy of a wide sale. Ginn & Co.

**Elements of Political Economy.** By J. Shield Nicholson. Dr. Nicholson is professor of political economy in the University of Edinburgh, and has previously issued his study of political economy in three large volumes in which he gives the substance of his lectures before his students. In his elements he reduces his larger work into one compact volume, designedly making it a book for the use of students and for general readers who have not the time or ability to take on the study of the larger work. In the smaller work the leading principles are stated without the introduction of controversial matter, the needs of the student being considered with the discussion of every subject. In clearness of definition, lucidity of style and candor of statement, Dr. Nicholson is a master. He goes right to the heart of every subject and treats it succinctly and evenly, his thought being extremely clear cut and unambiguous. It is a strong, wholesome text-book and deserves widest study and reading. Macmillan Company.

**Modern English Prose.** Selected and edited by George Rice Carpenter and William Tenney Brewster. The object of the editors of this convenient compendium has been to include in it as much as possible of illustrative material for classes in rhetoric and English composition. The selections are nearly complete and unabridged, and the book contains a rich store of essays, stories, and chapters, or other essential parts, of larger works. One can find in it all the various forms of composition. Rhetoric classes in our secondary schools will find it interesting and useful. The Macmillan Company. Price, \$1.10.

**Business Methods.** By William P. Teller and Henry E. Brown. The authors are well qualified for the making of a book in business methods, Mr. Teller being the credit man of a large concern, and Mr. Brown the head of a commercial department in a high school. Their book aims to provide a body of practical information pertaining to business matters, in a form sufficiently simple for use in the upper grammar and high school grades. The subjects treated of are, letter writing, bills, invoices, banking, notes, drafts, money orders, petitions, express business, contracts, leases, stocks and bonds, partnerships, insurance, deeds, mortgages, wills, etc. It is a book of practical knowledge, not a bookkeeping treatise. It includes only those facts which everyone should know, and it gives these in a most graphic and practical manner. It is a thoroughly usable and handy book for school use and will find recognition and prompt use wherever bookkeeping is taught. Rand, McNally & Co.

**Recent European History.** By George Emory Fellows. Dr. Fellows is the president of the University of Maine, an able teacher and well known for his superb work as professor of history in the University of Chicago. The time comprised in his book is from 1789 to 1900, a period which few text-books

touch upon, but one most interesting and important to students. Secondary schools offer very little history subsequent to the French Revolution, the nineteenth century being reserved for the study of upper classes in college or for graduate work. But as only a small fraction of students ever have the opportunity of studying this period, Dr. Fellows' book supplies a distinct deficiency. It is a work of striking power, written in a style that is most attractive and engaging, and packed with timely and necessary information. Benj. H. Sanborn & Co.

**Shorter Poems of Goethe and Schiller.** Selected and arranged by W. H. van der Smitten. The poems selected are arranged in chronological order, thus lending an additional interest to the individual poems and to the collection as a whole. To each poem is a commentary giving an interesting bit of information relative to the verse and the occasion of its writing; the notes are on the same page with the poems and are explanatory rather than exegetical. A well written introduction serves to illuminate the lives of the two greatest poets of Germany; a dozen full page illustrations embellish the collection and add to its value. D. Appleton & Co.

**Physiologies: Elementary Physiology and Hygiene.** By H. W. Conn. Dr. Conn is professor of biology in Wesleyan University, and eminently qualified to write a text-book that shall be scientific and teachable and interesting. Practical helpfulness is the keynote of his book, which is at once comprehensive in its treatment of the subject, and elementary enough for the upper grammar and lower high school grades. The treatment of the subject of hygiene from the strictly scientific standpoint is most valuable, and the information the student will absorb will prove of exceeding worth. The chapter on health and disease is one of the most practical we have seen in a text-book of this character; the discussion of contagious and other germ diseases is sane and pertinent. It is a stimulating, sensible, practical, wise text-book on physiology. Silver, Burdett & Co.

**First Book in Hygiene.** By William O. Krohn. This is a primer on physiology, and is written with a view to interest young persons in the study of the human body. The author does not attempt to give fullest facts relating to the subject, but to invite attention by talking tactfully on the topics that are most attractive to young folks, and by presenting the facts thereof in a manner to enlist interest and suggest further reading and study. It is a most satisfying primer; its use will serve to awaken a desire in the child to live the best life possible. D. Appleton & Co.

**Physiology Primer.** By O. P. Cornman and Oscar Gerson, principals of schools in Philadelphia. This is not so interesting a book as the one noticed above; it seeks to set forth in rather bald manner the rigid facts of physiology and anatomy, making it a book to precede the more formal study in the higher grades. If it is thus intended by the authors it may serve a definite purpose, but as a first book in the subject it is too difficult and too skeletony. Eldredge & Brother.

**The Louisiana Purchase, and The Exploration, History and Building of the West.** By Ripley Hitchcock. In connection with the St. Louis Exposition quite a literature has sprung up, manifesting the popular interest, and

serving as a means for the dissemination of knowledge in regard to a very interesting chapter in the history of the United States. The present volume covers the subject very thoroughly. Chapter first gives an account of the Spanish Discoveries; chapter second of the French in Louisiana, followed by other chapters on the French in the Eighteenth Century; The American Westward Movement; Louisiana's Critical Period; Louisiana an Active Issue; The Purchase Arranged; Transfer to the United States, etc. Part II concerns itself with the Lewis and Clark Expedition; Part III with the Exploration of the West; and Part IV with the Building of the West. There is a large list of illustrations and maps which add materially to the value and interest of the book. Ginn & Co.

**Arithmetics: An Introductory Arithmetic**, by David M. Sensenig and Robert F. Anderson, is the first in a series of three books in arithmetic planned by these teachers of mathematics in the West Chester (Penn.) Normal School. The plan of the series as demonstrated in this first book is to lead the pupils by inductive methods to the fundamental conceptions of every subject; to this end the work is most carefully graded, the subjects being developed by natural steps. There is an abundance of problems, and these are so worded as to hold the pupil within his own experience. Silver, Burdett & Co.

**Elements of Arithmetic**. By John W. Hopkins, superintendent of Galveston schools, and P. H. Underwood. This is an ambitious work of more than five hundred pages, in which the authors endeavor to give all that is necessary for the free study of arithmetic in the schools. They omit no subject usually contained in arithmetic text-books, and they elaborate each subject to the satisfying point of the most exacting of teachers. There is no departure from the established order of presentation of subjects, but there is a wonderful array of problems which the authors claim to be new. It seems to be a thoroughly safe and strong book, and with its wealth of problems will unquestionably find hearty acceptance with teachers. The Macmillan Company.

**The Primary Public School Arithmetic**. By J. A. McLellan and A. F. Ames. This is strictly introductory to the Public School Arithmetic, and forms with it a complete course which is based on McLellan's and Dewey's Psychology of Number, and has been received with approbation in many schools. Macmillan Company.

**Mental Arithmetic**, by Hopkins and Underwood, is an admirably arranged little work for quick solving of problems without pencil and paper. The problems are judiciously graded and are interesting and sensible. Conundrums have been thrown out and puzzles have found no lodgment in its pages. The Socratic method of development has been followed in every subject. It is an excellent mental arithmetic. Macmillan Company.

**Stories of the Ancient Greeks**. By Charles D. Shaw. Ginn & Co. This book is a collection of all the principal Mythological and Historical Greek Stories. As delightful reading for the young, and as a ready book of reference for adults where only the general character of god or hero is required, it will be a valuable member of the household. Some features of it, of not little importance are: its pronouncing vocabulary, containing every proper name used in the book; the Greek and Latin names, side by side, of gods and goddesses; and a

map of Greece, with coasts and islands of the *Ægean* sea. The illustrations are artistic and well chosen.

**The Young Marooners.** By F. R. Goulding. Edited and adapted for school reading. Standard Literature Series. This is a good story, founded on fact, of some children who drifted off in a boat from the coast of Florida to an island, where they lived alone for weeks. It is a revision of an old story, its first appearance having been made in 1852. It is excellent for teaching the young the possibilities inherent in human ingenuity. It is bad for them in depicting the children as looking with calmness and indifference upon dead animals, and even the dead body of a human being. This is not true life among civilized children, and its portrayal as such or the implication of it as anything to be desired is unfortunate in a book admirable, in all other ways, for childhood's reading. University Publishing Company.

**A Selection from the Best English Essays.** By Sherwin Cody. Dr. Cody's critical and historical introductions to the essays are the most striking feature of his little collection. The essays selected are well known and have served to illustrate the history of English prose style; the clever criticisms which the editor makes on them and their authors render the book mightily attractive and delightful reading. The general introduction is simply delicious and worthy a separate issuance. A. C. McClurg & Co.

**A Short History of England.** By Katherine Coman and Elizabeth Kendall. This is a most excellent history of England, told in simple, direct form. The personal element dominates, rendering the story of the English people doubly interesting to the young student for whom this book is primarily intended. The little side lights of anecdote and detail add greatly to the power to hold the interest of the student and detract in no manner from the value of the information. The illustrations, the maps, and the arrangement of the subject matter all conspire to make a very serviceable and excellent text-book for school use and reading book for general use. Macmillan Company.

**Beginner's French.** By Victor E. Francois. Against the old method of teaching a modern language through the eye only, the new method aims to train the ear, the tongue, and the eye, and to this end has Dr. Francois prepared his book of fifty lessons. Conversation begins at the very first lesson and continues to the very last. The lessons are easily progressive, methodically arranged, and within the experience of the young students for whom it is designed. It seems to be a very practical and usable work. American Book Company.

**Physical Laboratory Manual.** By H. N. Chute. This is the revised edition of a well known manual that has enjoyed a substantial repute in physics classes. In this new edition additional problems under Mechanics, Light, and Electricity have been included, to meet the demands of those colleges which specify certain problems in their entrance requirements. Coincident with these new problems are added more complete directions for experiments, new and improved forms of apparatus, many new illustrations, and three new tables, to wit, electrical carrying capacity of wire other than copper, four-place table of logarithms, and conversion table for changing from one set of units to another. The manual is now thoroughly up to date and is a most satisfactory and usable book for the physical laboratory. D. C. Heath & Co.

We have received the following books for review in EDUCATION:—

*American Book Company:* Steps in English, Books I. and II. By John Morrow, M.S., A. C. McLean, A.M., and Thos. C. Blaisdell, A.M. Spelling by Grades:—The Words in Baldwin's Readers. Carpenter's Geographical Reader: Australia, Our Colonies, and Other Islands of the Sea. The New Century History of the United States. By Edward Eggleston.

*The Macmillan Company:* Old-Time Schools and School-Books; by Clifton Johnson. A Hundred Years of Warfare, 1689-1789: or How the Nation Was Born; by Marguerite Stockman Dickson.

*Ginn & Co.:* Youth's Companion Series: Industries of To-day; edited by M. A. L. Lane. Notebook to accompany Bergen's Text-Books of Botany; by Joseph Z. Bergen.

*Little, Brown & Co.:* The Wood-Carver of 'Lympus. By M. E. Waller.

*D. Appleton & Co.:* College Training and the Business Man. By Charles F. Thwing, LL.D.

*D. C. Heath & Co.:* Modern Language Series: Corneille's Horace; edited with Introduction and Notes by John E. Matzke, Ph.D.

*Paul Elder & Co.:* Fairy Tales up to Now; by Wallace Irwin. Price, flexible cover, 25 cents. Matrix edition, 50 cents.

*P. Blakiston's Son & Co.:* Physical Education by Muscular Exercise; by Luther Halsey Gulick, M. D.

The Annual Catalogue of Purdue University, La Fayette, Ind., 1903-1904. Catalogue of Ohio University, Athens, Ohio, 1903-1904, and Circular of Information for 1904-1905. Research in State Universities; by Israel C. Russell; published by The University of Michigan. Report of Andover, Mass., School Committee for 1903.

*American Book Company:* Der Trompeter von Sakkingen, by Scheffel, edited by Valentin Buehner; Kinder-und Hausmarchen, by Grimm, edited by B. J. Vos; Bunte Geschichten, by Stoltze; Aus dem Deutschen Dichterwald, edited by J. H. Dillard; Colomba, by Merimee, edited by H. P. Williamson; Les Trois Mousquetaires, by Dumas, edited by C. Fontaine; and Mlle. de la Seigliere, by Sandeau, edited by E. M. White. Each of these books contains an excellent introduction, copious notes and a special vocabulary. Among texts of modern languages these books are superior because of their excellence of type, handiness of size, accuracy of notes and scholarly judgment; they are ideal books.

### Periodical Notes

Dr. J. M. Rice, in the April-June *Forum*, uses his recent investigations in educational matters to enforce "The Need of a New Basis in Supervision."—Harold Bolce sends from Japan, for the May number of the *Book Lover's Magazine*, a thoughtful discussion of the problems that will ensue "If Japan Should Win"—the third of his notable series of articles on "The Two Pacifics."—Many a sufferer will be grateful for the late Surgeon-General Hammond's valuable paper on "The Self-Treatment of Wakefulness" in the April number of the *Twentieth Century Home*.—"There are few nudities so objectionable as the naked truth," says Agnes Repplier in a spirited essay in the May *Harper's* on "The Gayety of Life." Miss Repplier makes a charming appeal for cheerfulness, both in our books and periodicals and in our lives.—In the May *Delineator* there is an article by Mrs. Theodore W. Birney on children's companions which may be read with benefit by all parents.—The May *Century's* features of war interest will be "Unhappy Korea" and "Korea, the Bone of Contention," both from high authorities.—The opening chapters of the May *Atlantic* are made brilliant and entertaining by the first installment of Professor Norton's series of Letters of John Ruskin, illuminated by his own delightful and illustrative comments and explanations.

# Important Publications

## **Fisher's Outlines of Universal History—Revised Edition, \$2.40.**

By **George Park Fisher**, D.D., LL.D., Professor in Yale University.

Also in three parts, price, each, \$1.00.

This most popular edition of Shakespeare has been thoroughly revised and reset in new size. The page is made smaller, to adjust the volumes to pocket use. The notes have been carefully gone over, and many new helps to the student are included. This new edition reflects the present state of Shakespearean criticism.

## **Lane's Latin Grammar—Revised Edition, \$1.50.**

By **George M. Lane**, Ph.D., LL.D., Professor Emeritus of Latin, Harvard University.

A careful revision of this well-known work, including whatever amendments are called for by recent historical investigation. The bibliography connected with the successive periods has been modified to meet present needs. The history has been brought down to the beginning of the twentieth century.

## **Rolfe's Shakespeare—Revised Edition**

Edited by **William J. Rolfe**, Litt.D.

Cloth, 16mo. Forty volumes. Price, each, 56c.

Distinguished for completeness, convenience of arrangement, accuracy of detail, and precision of expression. Combines condensation with clearness. No law of the language is neglected, no exception forgotten. In the revision by Professor Morris H. Morgan, of Harvard University, many changes and corrections have been introduced.

Gives special attention to the growth of civilization, in art, literature and government. Points out clearly the essential facts of Greek history, and shows its influence on subsequent events. It contains also a survey of Ancient Oriental Nations. Clear and well balanced, interesting and readable. Supplied with numerous helpful notes and illustrations.

## **Morey's Outlines of Greek History, \$1.00**

By **William C. Morey**, Ph.D., Professor in the University of Rochester.

## **Gateway Series of English Texts.**

General Editor, **Henry Van Dyke**, Princeton University.

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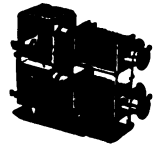
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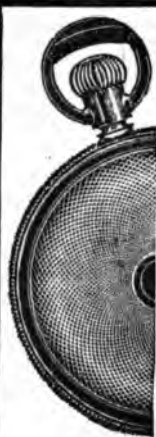
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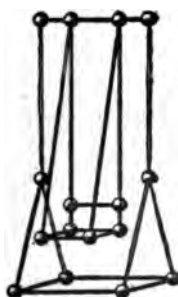
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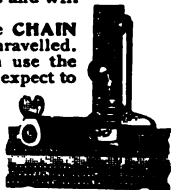
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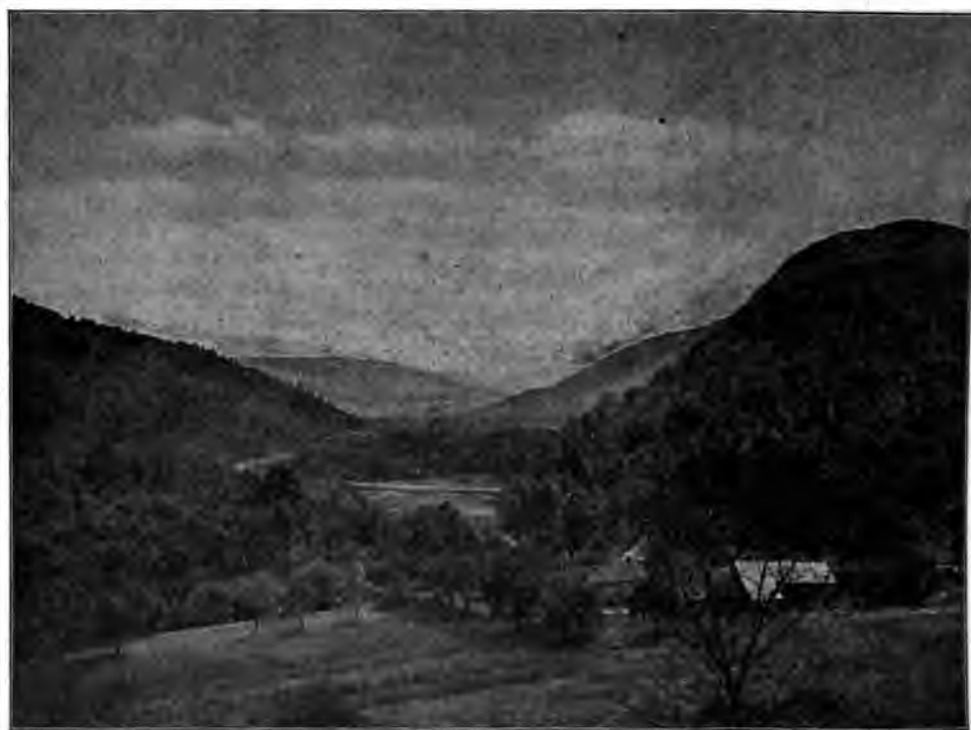
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### TABLE OF CONTENTS

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|--------------------|----------------------|---------------------------|
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| Assembly Rooms.    | Flooring.            | Toilet Rooms.             |
| Balustrade.        | Floors.              | Trees and Shrubby.        |
| Basement.          | Floor Plans.         | Ventilation.              |
| Blackboards.       | Foundations.         | Walls—Plastered.          |
| Boiler Rooms.      | Hand Railings.       | Wardrobes.                |
| Building Material. | Height.              | Windows.                  |
| Ceilings.          | Humidity.            | Window Shades.            |
| Chalk Troughs.     | Humidostats.         | Wood Finish.              |
| Chimneys.          | Janitor's Room.      | Etc., Etc., Etc.          |
| Class Rooms.       | Lighting.            |                           |
| Cloak Rooms.       | Material.            | Heating and Ventilation.  |
| Coal Bins.         | Metal Work.          |                           |
| Corridors.         | Partitions-Movable.  | Methods of Heating.       |
| Deafening.         | Principal's Room.    | Furnace Heating.          |
| Doors.             | Roofs and Roofing.   | Steam Heating.            |
| Drainage.          | Sites (location).    | Natural Ventilation.      |
| Dust Flues.        | Sites (how secured). | Mechanical Ventilation.   |
| Entrances.         | Stair Cases.         | tion.                     |
| Elevators.         | Steam.               | The Amount of Air         |
| Equipment.         | Teacher's B'kcases.  | Required for Ventilation. |
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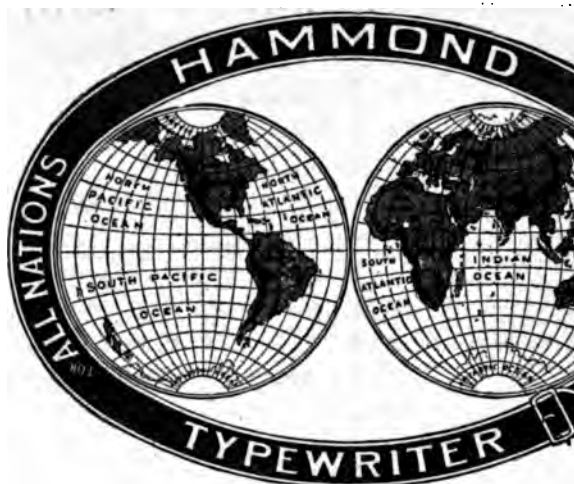
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### Map No. 7

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Vol. XXIV

JUNE, 1904

No. 10

# EDUCATION

A MONTHLY MAGAZINE

DEVOTED TO THE SCIENCE, ART, PHILOSOPHY  
AND LITERATURE OF EDUCATION

RICHARD G. BOONE, } EDITORS  
FRANK H. PALMER, }

## CONTENTS

|                                                                                              |     |
|----------------------------------------------------------------------------------------------|-----|
| Aim and Character of the Work of First-Year German. <i>Arnold Werner-Spankevil</i> . . . . . | 581 |
| The Public School System of Buffalo, N. Y. <i>Frank R. Jewett</i> . . . . .                  | 590 |
| The Best College: What Is It? <i>Edwin G. Dexter</i> . . . . .                               | 608 |
| Some Readjustments in Secondary Education. <i>A. R. Brinkman, Ph.D.</i> . . . .              | 618 |
| Two High School Reforms. <i>Prof. L. A. Gulien</i> . . . . .                                 | 621 |
| The Pedagogy of the New Testament. <i>Caroline S. Sullivan</i> . . . . .                     | 630 |
| Editorial . . . . .                                                                          | 639 |
| Foreign Notes . . . . .                                                                      | 637 |
| A Wedding. (Poem) <i>Ida Lory Chambers</i> . . . . .                                         | 641 |
| Book Notices . . . . .                                                                       | 642 |
| Periodical Notes . . . . .                                                                   | 648 |

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## *Publishers' Bulletin Board*



See page xl. of this number.

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Mr. James R. McDonald, formerly with The Macmillan Co., has accepted a position with Messrs. Little, Brown & Co., Boston, and will head an Educational Department to be established by this well-known firm.

In *EDUCATION* for September we shall devote an unusual amount of space to the subject of the study of English. We expect to print in full an able paper by State Agent James V. MacDonald, Massachusetts, on "The Plight of English in the American High School;" Superintendent Eugene Bouton, Ph.D., Pittsfield, Mass., will speak of "High School English with Special Reference to College Entrance Requirements;" and Mrs. Jean Sherwood Rankin, Minneapolis, Minn., will consider some "Weaknesses in the Teaching of English in our Common Schools"; Miss May Lowe, Circleville, O., will write interestingly about "How the Library Travels to the Country Family;" Professor Franklin Sawvel, Greenville, Pa., will speak of "American Art Galleries," with some special references to the art exhibits at the St. Louis Exposition, and unless crowded out by other things that may come up during the summer Mr. S. S. Dent, New York City, will present some significant facts about education in the Philippines. With our usual departments, this will make up a worthy number with which to open the twenty-fifth year of *EDUCATION*.

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A million is a larger number than is readily comprehended by the average person. In setting the advertisement of Benjamin Sanborn & Co. on page iii. of May EDUCATION, the printer added a cipher to the statement of population of a territory which has officially adopted the well-known Southworth-Stone Arithmetics. This error passed several proofreaders, and, of course, made the advertisement appear ridiculous. We desire to say here that the error was not the fault of Messrs. Sanborn and Co. The corrected statement appears on the same page this month, and we cordially wish the firm an adoption of these splendid arithmetics that may be truthfully described as 19,000,000.

Mr. M. T. Rogers, for years identified with the J. L. Hammett Co., has assumed charge of the new School Department of The Scarborough Company, whose advertisement appears on another page. This firm's "Peerless" series of school maps is well named, judging from the map of New Jersey, which we have had the pleasure of examining. It has physical, geological, historical, commercial, political and other features, which put it at once into the very first rank of maps for school and other purposes.

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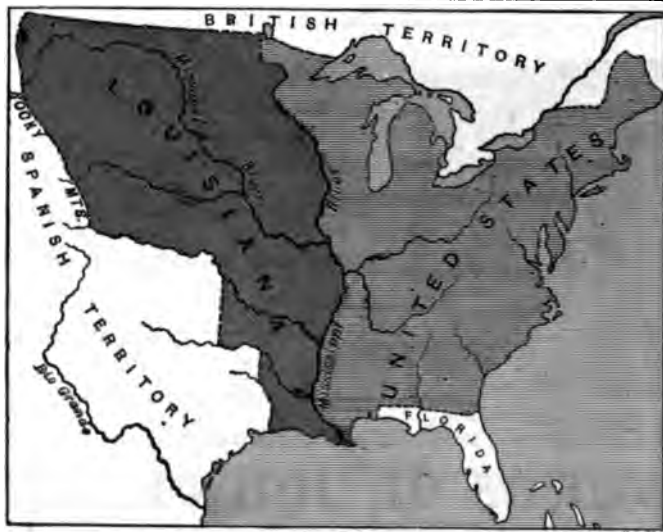
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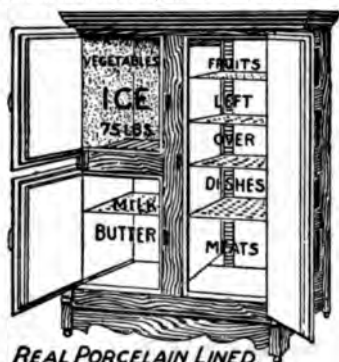
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¶ 2. The authors of these texts have neglected to show the continuity of the subject, and the interlocking relations of the propositions. The beginner thus sees the subject as a fragmentary string of disconnected facts, and derives no pleasure nor profit from its study. In short, the student loses the spirit of the subject-matter.

¶ 3. They have made little or no attempt to train the student in original exercises. He has become accustomed to copying demonstrations from the book, and when confronted with an original exercise, is at a loss to know how to proceed. He fails in it from every direction with equal failure, and is discouraged by his inability to apply his knowledge.

¶ 4. From the faulty formation of the proofs there is a tendency to memorize literally. This practice hinders his subsequent progress in mathematics. He draws

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from his study, and generally knows less at the end than he knew in the beginning. The purpose of Geometry is not to exercise the memory, but to train the observation and the faculty of reasoning. History is a better subject for memory work. We might add that many of our best secondary schools have been obliged to discontinue the use of text-books in teaching Geometry. Numerous other weaknesses could be pointed out that have contributed to the downfall of the books in question.

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THE aim of the first year is that of the whole course. Naturally, we cannot accomplish as much work in one year as we could in four, but this fact should not mislead us as to our aim in general. There must be unity of purpose, or else our department will be nothing less than a tug-of-war. Now this is a very simple fact and most of us will accept it as a truism, but it is very difficult of application. The truth is, we rarely ever do apply it, and, therefore, do not attain that perfect harmony in our department which would assure the greatest success. Unity of purpose decides which work should be assigned to each year of study; it demands for the first year classes teachers who possess a clear insight into the workings and ends of the whole department, *i. e.*, the best educational talent, since it is here that the foundation is being laid for all future work, where most problems of later years take root.

Now let me ask, What is the aim of a German department? I do not hesitate a moment to answer; it is that of the school of which it forms an integral part. If we wish to arrive at a satisfactory understanding of our own aim in teaching German,

we must, above all, have a clear and definite idea of the relation existing between our department and the school as a whole. It is frequently claimed that the primary school is to prepare for the high school, and this in turn for college, as is the case with the German university and its preparatory school, the gymnasium. This view, it appears to me, is erroneous. The German university cannot be compared to our American college, nor the German gymnasium to our public high school. The sole aim of a German university is to prepare for the higher professions, and, therefore, equals our college only in its graduate and professional courses, based upon an academic degree. Our American high school, also, cannot be likened to a German gymnasium, the sole object of which is to prepare for the university. Graduation from a gymnasium entitles the student to enter upon a professional course at a university, and nearly all of its graduates take advantage of this privilege. In 1900 we had 619,262 students enrolled in our public high schools; 50,202, *i. e.*, 10 $\frac{1}{2}$  per cent, had chosen the college preparatory course, but only about 3 $\frac{1}{2}$  per cent were actually prepared for college. In Washington, where the percentage of graduates is far above the average, the greatest number of students ever prepared for college is 6 $\frac{5}{8}$  per cent of the entering class. What then is to become of the enormous percentage of students who want to go to work before or after they are through with the high school? These, it seems to me, should be equipped for the duties of life,—life in the broadest sense of the word,—and not for college. Most of our college professors, and indeed many high school teachers also, do not seem to appreciate the fact that the insignificant number of students preparing for college should be taken into consideration in formulating our aim in teaching modern languages. Even the Report of the Committee of Twelve, though it contains many excellent suggestions, fails in this respect, and, therefore, loses much of its value to the high school teacher which otherwise it might have had. Nor is this all. The report utterly disregards the difference existing between a public high school and a private school, though the latter has 21 per cent more college preparatory students, and statistics show that the per-

centage of such students is steadily decreasing in the public high school, while it is rapidly increasing in the private institutions.

Preparation for college and training for life are two different things, which cannot coalesce. They differ in their curriculum, their aims and methods of instruction—the former being special, the latter general. I fully appreciate the great influence that the university may and should have upon all branches of education, but I seriously protest against college interference with secondary education, and the introduction of college aims and college methods into our public high schools. What it inevitably will lead to may be seen from the absurd statement of a high school teacher who seems to be thoroughly saturated with college ideas. Having made the discovery that more than 25 per cent of his first year students do not continue their study of German for more than a year, he exclaims: “Such students are only a hindrance to the real student, and a burden to the teacher, who will find the elementary instruction in language difficult enough without being hampered by this dead weight.” If such ideas are aired in public, we must not be surprised at the general outcry of our citizens that the high schools are becoming top-heavy, and that free public education is an unjustifiable burden upon the community at large. Had this teacher looked a little further into the matter, he would have found that in the public high school about 40 per cent of the first year students do not continue in the second year, about 30 per cent of the second year students never see the third year, and only 12 per cent graduate. For the sake of these “chosen few,” then, he would sacrifice the opportunities of the so-called “dead weight.”

It is a mistake, what the Committee of Twelve contend, that we should turn to college professors for guidance in our affairs. The average college professor has a very superficial knowledge of the conditions prevailing in the public high school, such as pertain to teaching force, equipment, age and capacity of the student; we must look to our principals, our superintendents. Commissioner Harris, a man of the deepest insight into public education, says: “No public institution is

established on a firm foundation so long as it is beneficial only to a small class of the community." Let me also quote what is said by a high school principal, Mr. H. H. Morgan: "To create or to perpetrate caste among the people, whether this caste be of workingmen or of the professions, is, upon the theory and practice of the United States, contrary to the public good. We therefore leave all special training to the benevolence and influence of the private individual."

Supposing this to be true, which I think will not be denied, let me ask the question: What constitutes the value of teaching German in our public high schools? for this must determine the aim to be pursued. There appears to be little or no difference of opinion among teachers and college professors as to the aim of the study of German, and if I were to maintain that it is the literature, I should have voiced the opinion of nearly all. We must concede that literature is the end of language-study in general, but whether this should to any large degree influence the aim of our department in the public high school is a view that may be reasonably questioned. At any rate, the problem of determining the exact relation of literature to the teaching of German in our public high schools is worthy of careful consideration before we accept on trust the opinion so often expressed by college professors, that our students are learning German solely, or even mainly, for an acquaintance with its literature.

To a student in a college preparatory school the value of German is equal to three points in the college examinations. This fact is forcibly brought out by the relative percentages of French and German students in our public and private schools, the former having a percentage of 8 for French and 14 for German, the latter 23 for French and 18 for German; an increase of 15 per cent for French, and only 4 per cent for German. The public high schools of New Jersey give 7 per cent to French and 32 per cent to German, but the private high schools and academies have 38 per cent for French and 35 per cent for German. I have taught too many years in private schools not to know that this astonishing difference between French and German is due to the common belief among college preparatory students that a reading knowledge of French is more easily acquired than a

reading knowledge of German, and since the sole aim of these students is to be admitted to college we cannot blame them for choosing the less of two necessary evils. Literature does not enter into the calculation of either teacher or pupil.

If there is any school where the student should derive from German literature intellectual broadening and æsthetic culture it is the college, but even here it is at best very doubtful. Professor Joynes of the University of South Carolina, one of our most enthusiastic and serious teachers, in speaking of the subject, says: "And so it is that the French and German literatures, with all their wealth, all their promise and potency of culture, of delight, of inspiration, of power, remain a dead letter in the lives of the vast majority of all our college graduates. If this is not true, I fain would be corrected, but I fear it is only too true."

If colleges fail, are high schools apt to be more successful? Maybe, maybe not. I doubt it. Now, this seems to be a serious and ungracious accusation, and I should hesitate to make the charge did I not believe it to be within our power to remedy the condition, to a large extent at least. Of nothing am I more thoroughly convinced than that we lay out our plans on too vast a scale, forgetting to give due attention to the attainment of a perfect gradation, the *sine qua non* of all progress. I do not for a moment deny to literature its lofty place in language-study. It would be absurd to do so. But literature is a final aim, which can only be reached step by step; no one has ever reached it with a single bound. Literature, I dare say, will take care of itself if we provide the conditions under which alone it may perform its elevating influence upon mind and heart; in other words, if we give careful and thorough instruction in the language, for little is gained from a German classic unless the student can read it without special consciousness of its being in a foreign language. As long as he reads it "with tears," thumbing his grammar and dictionary, it is waste of time, which may be better spent on a work of English literature. Now we attempt to teach literature and allow our students to pick up by the way the few crumbs of educational value this course may offer; the results have proven disastrous for both. Let us then



turn the tables and make it our sole aim to teach the language, and by choosing good books provide material which will foster and develop a taste for literature.

The study of German, moreover, must be of real benefit to every student, even should he never come under the influence of German literature, as is the case with the vast majority of high school students who leave us before graduation. What Professor Laurie says of Latin is true for German: "That our method be such as to give to every pupil the full benefit of the training and discipline which the language is presumed to afford and which the pupil's age admits of, at whatever point he may cease to study it. Herein lies one of the claims which all method permanently makes on the teacher—that it assures this admirable result. Each day's lesson justifies itself." Let us not neglect the student who stays with us only one year. That year amounts to one ninth of his entire schooling, and ought to be worth a great deal to him, and will be if his needs be recognized. The fact that only 12 per cent of our students graduate is a serious question, which occupies the attention of thoughtful educators in all parts of the country. I sincerely hope that most of these are leaving us for good reasons, but I am convinced that many also leave school because we fail to adapt our teaching to their capacity and needs. The fault may not always be ours, but no matter where the blame rests, existing conditions make it our duty to do all within our power to improve them.

Much may be accomplished in this direction by the method of instruction. I use the word "method" here in its good old sense, and do not refer to any special method, such as the "natural method," the "grammar" and the "reading method," etc., which, no doubt, may serve their purpose admirably under certain conditions. The success of any method depends upon the aim in view and the conditions under which we are laboring, for there can be no doubt that the method must be suited to the needs and the mental capacity of the student, no matter what the teacher may prefer. It is impossible to teach a student in a primary school in the same manner as in the high school; the method must necessarily vary according to the laws of mental evolution. Each grade, in fact,—the primary school, the high

school, and college,—should have its characteristic method, as also its special curriculum of study. For the primary school the inductive method used with a view to educating the senses, the imagination, attention, memory, judgment, etc., seems to me the most rational. With the growth of the reasoning powers the imitative faculty and the retentive memory of the child gradually recede, involuntary attention becomes voluntary, and the student now remembers better by association. Under these circumstances I should prefer a combination of induction and deduction, still essentially inductive, in as much as it attacks the living language first, but the student should no longer be expected to accept on trust that for which a reasonable explanation may be given; finally, when the student is in the full possession of his faculties, when he can learn for learning's sake, I see no reason why the purely deductive method should not be used with equally good success. I myself should never think of using any other method in learning a foreign language. I begin with a short grammar, giving an outline of grammatical forms, and after a few days begin to read, first a book that is very familiar, such as Grimm's Fairy Tales or chapters from the Bible, etc. Since grammar is about the same in all languages, only differing in outward forms, any person having studied Latin, Greek, and one or two modern languages, will thus be able to acquire a new language with almost no effort whatever in a very short time. We are all familiar with this "reading method," and have observed its usefulness again and again in teaching students who have had a few years of Latin. If, however, this method be applied to children who have never studied any language but their own, it will naturally lose much of its value. The results have been, to say the least, very discouraging, so much so that enthusiastic votaries of this method despairingly recommend that the study of German be postponed until the student be sufficiently grounded in Latin. The success of this method then depends upon the student's knowledge of Latin, a fact which no teacher can afford to disregard. I grant it is a very easy way of overcoming this difficulty by making the Latin teacher do the work, while we read fairy tales and novels in our class rooms. The fact is, however, that the Ger-

man should do for the scientific students what Latin does for the academic students, but this is seldom, if ever, the case. It is sometimes claimed that Latin offers special advantages for disciplinary training, such as cannot be attained by the study of a modern language. Though this statement may be, and often has been, challenged by men of authority who are able to judge of the comparative values of these languages, the true question for us to ask is not, Which is better? but rather, Of what benefit can German be made to the student who does not study Latin? At present the disciplinary value of Latin far surpasses that of German, but I attribute this fact mainly to the manner in which Latin is taught, not so much to the language itself. It stands to reason that a thorough study of Latin must yield better results than a superficial study of German, but as yet we do not even know what German might do for the student if it were taught only one half or one third as thoroughly as Latin. I do not advocate a modern language being taught like a dead one, but this certainly does not mean that our instruction should be indifferent; otherwise modern languages had better be taken off the high school curriculum altogether, for in that case they would do more harm than good by the demoralizing effect upon the student's attitude toward his work in general. High school students read about 300 to 400 pages of Latin, but they are expected to read 1,100 pages of German in the same length of time (Report of the Committee of Twelve). Nor is this all. It is suggested that these pages be read with understanding and appreciation, that the students receive constant drill on the text, numerous exercises on the grammatical difficulties, practice in composition and independent theme writing upon assigned topics. Our students must be able to read any German literature of the last 150 years and to answer in German questions relating to the lives and works of the great writers studied; in short, they should know more German than a high school student could learn in ten or more years. A suggestion which thus involves time, thoroughness, and 1,100 pages, seems to me a rather difficult one to follow; for unless these three can be combined successfully, it will force the teacher to make choice between quality and quantity, sacrificing the one to the other to

meet the requirements. Now, thoroughness is a very elastic term; it may mean a great deal or next to nothing, while 1,100 pages is something tangible at least, something one can swear to in signing a college certificate. There is no doubt at all in my mind that all inferior or inexperienced teachers will choose the latter, since it is pleasanter work, more definite, and infinitely easier, as it may be bolstered up by literal translations.

Copious reading before the student is prepared for it has but one advantage, in that it serves as a sort of review of words and phrases, but at the same time it introduces so many new words that it might be reasonably doubted whether this sort of review is easier and better than thorough and careful drill on less material. Besides, the acquisition of words and phrases gained by such reading is based on memory only, and, therefore, has little or no educational value. Nor am I too sure whether the scanning of 1,100 pages will mean anything in regard to intellectual gain. For my part, I am more inclined to accept John Ruskin's idea, who says, "Get into the habit of looking intensely at words, and securing yourself of their meaning, syllable by syllable, nay, letter by letter. You might read all the books in the British Museum if you could live long enough, and remain an utterly illiterate, uneducated person; but if you read ten pages of a good book, letter by letter, that is, with real accuracy, you are forever in some measure an educated person." Reading is good as long as it produces thought, but too much reading curtails it. It has been aptly said that people read so much because they are too lazy to think.

I do not wish to be misunderstood, however. As I have said before, I heartily approve of the reading method, and would not hesitate to recommend it to anyone with a sufficient knowledge of Latin, or as a continuation at college of a thorough high school course of German. There is nothing new in the reading method; as far as I know, it is used in all parts of the world, though rarely without preparation for it, as in this country. The Committee of Twelve are well aware of the deficiency of our "American reading method," saying: "A few things thoroughly and intelligently done make the best secondary discipline. As long, however, as our present condi-

tions last it is clear that we must give up some are all willing greatly to lengthen the time guistic part of our children's education, w renounce the idea of a full, well-rounded know and German, and selecting the portion of appears most important for the greatest number to the cultivation of that restricted field." ] that thoroughness and disciplinary training, the to be the best for secondary instruction, shor for a mere phantom which at its best can be report says, "not with the complete apprecia all-round command of the language can giv same kind of intelligence and enjoyment with sical scholars read Latin." And this is done t important to the greatest number of our student me that a mere glance at our high school stat quite a different story. It is a common mistal professors to imagine that the primary grad school exist solely for the benefit of the colleg that the natural growth of education is upward versity, not downward, and that any state mak free public instruction of its citizens has to co grades first before it has any right to provide tion, nor is any lower grade to be sacrificed to

Let me enumerate a few principles which sho the start. Psychology teaches that the min progresses in perfect gradation from the unknown. This, it appears to me, leads us to student should begin the study of a foreign la parison with his mother tongue. Though I do this course should be pursued *ad infinitum*, in can never be avoided even with object teachin grades. It matters little whether we show the and tell him its name in German; only ti drill will enable him to think of it first in Gern

If the mind of the student advances in perfe may reasonably infer that we must proceed s should never teach more than one fact at a ti

of the most important rules for good teaching, since it affects the pupils' attention, which, as we well know, is the keystone to success. By attempting to teach several things at the same time we weaken his attention in proportion to the number of new ideas introduced, and therefore do not attain that perfect concentration of thought which will overcome any difficulty. The teacher should enter the class room with the definite purpose of impressing one new grammatical fact and with a clear idea of the way in which he proposes to attain this end.

These two principles suggest a third of no less importance, that of introducing ideas before words. Do we transgress in this matter? Indeed we do. It is a common mistake among teachers to imagine that the student knows more than is the case. Almost all our text-books are designed for school or college use. A high school book may be used in college with good success, but alas! most of these books are really college books, and therefore far above the heads of high school students.

Now, here are three principles which confront us before we start out to teach a beginners' class. I have tried to solve the problem by beginning with the following three sentences: *Der Sommer ist warm. Die Rose ist rot. Das Gras ist grün.* It will be seen that I choose words that are almost alike in both languages, with one exception in each sentence, the definite article. This is done because I wish to teach the rule that the definite article has three different forms, one for each gender. The three sentences are written on the blackboard, and if you wish, with the English beneath them: The summer is warm. The rose is red. The grass is green. Now we have nothing to do but to wait for the result, which will speedily come, unless the student is void of all power of observation. First one member of the class, then more will raise their hands; we can read their thoughts in their inquiring faces: they wish to know why the German has "der" in the first sentence, "die" in the second, and "das" in the third, the English having the same form in all. The student has been puzzling about this matter, and every chance should be given him to rack his brain. It is our purpose to teach him to think and we can accomplish this

only by making him think, or as Sir William says, "The primary principle of education is the training of the pupil to self-activity—the doing nothing for him, but enabling him to do for himself." Thinking and puzzling are necessary; a student's mind naturally craves a puzzle. Care must be taken of course that the puzzle is not beyond the student's capacity; this may generally be done by carefully grading the difficulties, otherwise the student will be discouraged. The situation will be relieved by the student's own effort.

The first step is always the most difficult; the second is easier, provided, however, the student has overcome the first. After a little respite produced by the first step, the teacher asks: *Was ist warm? Was ist rot? Was ist grün?* which he delights in answering and which furnishes the first use of the article, I change to: *Wie ist der Tag? Wie ist die Sonne? Wie ist die Rose? Wie ist die Blume? Wie ist die Erde? Wie ist die Luft? Wie ist das Wasser? Wie ist das Feuer?* When reading these answers on the board the student will immediately observe that a new article is substituted for the noun, which, of course must be the same. A similar course is pursued in teaching the indicative and the imperative; in short, through all the various stages of grammatical progression.

But knowing is one thing and doing is another. We can apply what we know, all our knowledge is of no use for which the world has no use. Doing is the most important in education; it strengthens the will, the physical and mental power to do good work, and builds character. The student then must learn to do, and he must learn it at once, for it is a new thing to the student anything with which he does not know. Moreover, he must learn to do it well, and for else he will not be able to overcome the difficulties of the encounter as his knowledge increases. Habit of strength for future effort; without it we should go beyond the first stages of infancy. It has been the duty of the teacher to furnish the pupil the ability to apply what he has learned—reading, translation, or conversation?

easily answered: All three, of course, for all are good. For drilling purposes, however, conversation is the best, since it is the most flexible, and if carefully graded may be taken up at the very beginning. Many of our teachers do not believe in conversation; they contend that we cannot teach our students to speak a foreign language with any degree of fluency. As for that, we cannot teach literature either, or does anyone suppose that Immensee, Leberecht Hühnchen, and Höher als die Kirche—that is about what more than half of our students ever see of German literature—can give an adequate idea of what German literature really is? If our students do not approach the fluency of a native, they evidently take great pleasure in whatever little they do accomplish. Conversation stimulates interest; if it did nothing else, it would deserve a place in our instruction. What is sometimes thought by the average undergraduate of a language that cannot be spoken is feelingly expressed in the following little verse that I found in a Latin grammar:—

“All are dead who spoke it;  
All are dead who wrote it;  
All must die who learn it:  
Blessed death! they earn it.”

From the point of view of a high school teacher it is of little importance whether the students learn to speak a foreign language with absolute fluency. Speaking a language is not an end in itself, only a means to an end. It is by all odds the most powerful auxiliary at our command in teaching our students to apply their knowledge; it is the doing in language study. It is frequently maintained that students learn better through the eye. Maybe they do, but it cannot be denied that they also learn a great deal by means of the ear. No doubt I could get along with one leg, but having two, it would be absurd for me to put either one out of commission. The fierceness with which conversation has been attacked has made me believe that in some cases these opinions are influenced by the inability on the part of the teacher to make proper use of it. It stands to reason that these will clamor against it, and not knowing the value of a speaking knowledge they denounce it as worthless. Let me quote here one of our most celebrated professors, the late Dr. Herman Grimm, who writes: “I under-



stand the Provançal only as far as I have philologically. I have never spoken it myself when I was a child, as I did the French under these two conditions the true spirit of a language never be grasped." It is needless to say that conversation should be conducted systematically; mere talking will not do, conversation must be natural. Object teaching has its share even in high school instruction. We need no longer produce a cat or dog if we want to teach these animals—the time for such teaching is past. On the other hand, it seems absurd to ask, *Ist dieses Lateinisch?* without referring to books in sight, or without pointing to an object. Such conversation should be as the reading of little dialogues, which also provides practice in pronunciation. Hand in hand with conversation should go thorough instruction in pronunciation.

I have expressed my opinion of the reading of literature. I will now add a few words about reading. It appears to me that the truest statement that has been made in regard to the position of reading is that it should be the center around which the whole of education revolves. I heartily agree with this view. Language is the vehicle of all intelligible or visible thought. Where there is no thought there can be no language. Thought, then, is all-important in education. The printed or written word is a vehicle of thought and should produce in us a true image of what the author's mind. If it fail in this, reading has lost its purpose. It is therefore unfit for its high position in language education. If we understand the thought we must know the language. If we know the language, then, can be made the center of our education. The first thing students must learn to read. In the beginning, reading is of less importance than in the advanced stages. It is sure, if our students are to attain fluency in reading, that they must read; but it seems to me little less than an assassination of the great work of Schiller or Goethe for such purposes. Reading should never be turned into a drudgery by making it a mere linguistic study. In reading are the possibilities of intellectual education, and we should create a disposition to read for pleasure.

Summing up these views, let me say in closing : The aim of the first year must be that of the German department, and this in turn should lead to the same goal as that of the high school, leaving all specific training for the professions to the professional school and the university, but bearing down heavily on the purpose of education in its broad sense, as the harmonious development of all the human faculties which will enable man to discharge intelligently his duties toward himself and society, and fit him for any pursuit he may afterward choose as a means of gaining his livelihood. I thoroughly appreciate the great value of German literature ; but he who supposes that within the limited time available in the class room an adequate idea of its infinite and varied beauties can be inculcated, knows little of the true nature of the literature of Germany. As a matter of fact, the amount of German literature which our students are able to review in the school or college course is equal to that which they can read of English literature within a week's space. The culture element in German literature will not make itself clearly felt until school and college days are a thing of the past, and he will never enter the portals of a literary realm who does not carry away with him at graduation a thorough preparation for such higher intellectual enjoyment and an ardent desire to obtain it. I also believe all that has been said as to the practical advantage of a knowledge of the German language, but this does not convince me that German should be taught for a merely utilitarian purpose. In our public schools, at least, German should not be taught simply for its own sake, or with a view to assisting a few of the students in their future occupations and professions, but so that every pupil passing through a thorough and scientific process of learning the language shall have acquired from it the power and habit of doing good and honest work, together with a love of knowledge and an earnest disposition to acquire it. The vast majority of our students on leaving school close their German books forever, and the language ceases to be of material value to them. If, then, we wish to benefit every student enrolled in our schools we must not restrict our aim to the values of either language or literature, but found it upon the rock of thorough instruction. "Education," says John Stuart Mill, "makes a man a more intelligent shoemaker, if that be his occupation, but not by teaching him how to make shoes ; it does so by the mental exercise it gives and the habit it impresses" ; and as our own compatriot, James Russell Lowell, contends, "It matters less what a man learns than how he learns it."

## *The Public School System Buffalo, N. Y.*

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CONSIDERABLE interest has been late in the different forms of organization in city school systems. The rapid growth of cities and the proportionally increased importance attached to the office of superintendent have rendered the method of appointing the superintendent a subject worthy of careful consideration. The size of the city, the composition of the school board, the relations of the superintendent to the board, and the standard required for teachers have also been considered and discussed. It is therefore, that the following article will not be without interest to the readers of *EDUCATION*, as it is an honest attempt to show what they really are in an existing school system, and to compare the results obtained under such a system as that of Buffalo with those reached under other forms of organization.

The public school system of Buffalo has a form of organization different from all the cities of this country. Frank Rollins, of Pennsylvania State University, has recently collected data in regard to the form of government employed in different city school systems. From this data it may be seen that in the generally accepted form of organization the superintendent is appointed by the mayor; in some cities he is elected by the people. The form of organization in Buffalo differs widely from that of other cities in the fact that the board of education aside from that constituted by the mayor and a committee from the board of aldermen. Most of the executive functions ordinarily vested in the city school board are given to the superintendent. An examining committee of five members is appointed by the mayor to ascertain the fitness of those who are candidates for positions in the school system. The scope and character of the examination are determined by the superintendent, and the teachers are subsequently appointed to him from a list of those who have passed the examination.

From these facts it is clear that in Buffalo the superintendent of schools possesses unusual powers, and to a greater extent than usual directs the policy of the schools. Upon the wise choice of the superintendent, then, depends to a great extent the welfare of the schools.

With the exception of San Francisco, Buffalo is the only city of importance in the country in which the superintendent is elected by popular vote. This method of choosing the superintendent is very generally disapproved by educational writers. It is a fairly well established principle of government that the selection of any officer whose duties require technical skill along some special line is, as a general thing, better made by appointment than by direct vote of the people. The founders of our government foresaw this when they left the choice of members of the cabinet to the president, and not directly to the people. A superintendent of schools in a large city in these days must be an expert along the line of education; he should be a man of broad views and considerable business ability, but it is as well and, in fact, better for the city if he is not gifted, to any extent, with political ability or inclinations. Many of the ablest city superintendents of this country would never have gained their positions had they depended upon popular vote to put them there.

By what has been said above no reflection is intended upon the present incumbent of this office in Buffalo. It is, of course, possible that a man should combine both educational and political ability, but the author simply contends that such a method of selecting the superintendent is exceedingly dangerous to the welfare of the schools of any city. The neighboring city of Cleveland, which can boast of schools among the best in the country, entrusts the appointment of its superintendent to an officer called the school director. The school director is responsible for the business management of the school system, and it is part of his business to select as superintendent one who is qualified to control the educational policy of the schools.

The conditions to be met in Buffalo are much the same as those in other cities of corresponding rank. The census of 1900 gives the city a population of 352,387, of which number 104,252

are foreign born. Many of these foreigners are Canadians. Of the remainder, a majority are Poles. One very interesting school, with nearly all pupils, is made up almost entirely of Italian children. As is usually the case, these people live so that it is convenient to bring them together at certain schools exclusively to their instruction. The school mentioned above is given over almost exclusively to Italian and Sicilians; another has a large percentage of Polish children, while two others are composed, for the most part, of Polish children. For these children of foreigners, the presence of a teacher of their own race is desirable, and this leads to a distinctive training and character of the teachers employed in these schools.

In accordance with the State law of 1895, a city training school has been established in Buffalo to give professional training to those who are to teach in the city schools. The city training school has a one-year course in preparation for teaching, and requires a certain amount of preparation in other subjects. Most of the students before entering have graduated from a four-years' course in the city high schools, known as the preparatory course. The city training school furnishes a professional training, and the State Normal School, located at Buffalo, gives a more general training. The number of teachers employed in the city schools is about 1,000.

Nearly all the large cities of the country are making an honest effort to improve the character of their teaching by making a thorough professional training a pre-requisite for employment in the schools. Cleveland has an excellent city training school with a two-years' course; a building devoted to the work of this school, while another sixteen-room building constitutes a model school for practice teaching. In Buffalo, it is remarked that Buffalo has but a one-year course in the city training school, and the entire work of the school including practice teaching is done in one nine-room building. The city training school questions the advisability of a two-years' course of the school, in consideration of the fact that the teachers receive for their first term of service but \$1,000 a year.

It is not the purpose of the author at this point to digress into an extended discussion concerning teachers' salaries, although a discussion of this phase of teaching life will sometimes attract interest among members of the profession when other subjects fail. That the chances for amassing wealth in the teacher's profession are sadly disproportionate to those in many other lines of work is a much lamented fact. It is not, however, at the lower end of the profession that the increase should be asked for. The young lawyer, after graduating from the high school, spending three or four years in college, and afterwards as many years in a law school, is fortunate indeed if he can earn as much as four hundred dollars for his first year of service. The fact is that the salary paid to teachers for their first year's work is higher than that ordinarily offered in the other learned professions. This has been a bad thing for the profession, as it has attracted many to enter the work temporarily, simply to get means to go on with some other line to which they intend to devote their lives. The fact that there are so many people in the work simply to get what they can out of it for a short time has made it what Mr. William McAndrew rather inelegantly terms "the rag-tag and bob-tail of the learned professions." The point for which all teachers should contend is a more rapid increase in salary after the first year; remuneration that will make the profession possible and even profitable as a life work. The salary paid for the first year of service in the Cleveland schools is four hundred dollars, and that city seems to have no trouble in inducing a sufficient number of bright girls to enter the training school for a two-years' course of professional study after having had the four-years' high school course required.

As the population of a city increases, and consequently the number of schools and teachers, the duties of the superintendent become so extended that it is necessary to furnish him with assistants in the work of supervising. Buffalo was evidently a long time in discovering this fact. When, in 1892, Mr. J. M. Rice in the interests of the Forum inspected the school systems of different cities of this country he had many caustic remarks to make in regard to the character of the teaching which he observed in the Buffalo schools. At that time the condition of

things in Buffalo was very bad. With a force of three hundred teachers to supervise the superintendent himself, and that one man could by any means adequately manage such an army of teachers was an obvious implication of professional training both before and after graduation. The schools resulted in a very low order of teaching.

At the present time a considerably improved system of affairs exists in the way of supervision. The superintendent is personally very active in visiting the schools, and is assisted in this work by a force of ten supervisors or directors. It is fortunate, too, in having as a supervisor of primary schools a woman thoroughly devoted to her work, of excellent character and high educational ideals.

Along the line of supervision, however, one feature which characterizes most city school systems seems to be lacking in Buffalo, *i. e.*, a definite program of studies, stating in advance the amount and character of the work to be done in different periods of the year, giving directions for teaching different subjects, and containing a definite plan to obtain uniformity in all the schools. For some of the common branches and for physical culture small pamphlets are published, designating simply the scope of the work for different grades, but this compares very unfavorably with the excellent courses of study prepared in other cities. The course in reading published by the Indianapolis Board of Education, the nature study course of Newton, Mass.

It would obviously be unfair to render judgment on the Buffalo school system from its form alone. One of the chief cries of complaint against the prevailing type of education is that too much attention is paid to form and too little to results. What ought to be the true end of elementary education is, however, a question not yet agreed upon. The business man looks upon education from one point of view, the high school teacher from another, and the psychologist from still a third.

It is certain that in the Buffalo schools the standard is where it should be,—upon the school arts,—and that it is not allowed to wander from the strait and narrow.

flowers by the roadside. The author, during his visits to the schools, observed much good work in arithmetic, reading, spelling, language, and geography. The work done in composition seemed especially commendable, well correlated with the subjects of history, geography, and drawing, and presented to the children in an interesting way. Every means was taken to encourage the children in neat work, and an attempt was made to bring out the thought, wherever possible, by illustrative drawings.

A good opportunity for teaching German in the elementary schools of Buffalo is presented by the fact that so many of the children are of German parentage. This opportunity is well improved, and some excellent work along this line was observed in the sixth and eighth grades.

Apparently no attempt has been made to establish a uniform course in nature study in the Buffalo schools. The primary supervisor assured me that this was impracticable, as the diverse character of the different schools rendered any attempt at uniformity impossible. It was her opinion, too, that a uniform course of study would destroy individuality of work and that the character and scope of the work could best be decided by the character and location of the school. This scheme seems to work well in schools where the teachers are of a high order, but in other schools in the central part of the city where nature study would be of the greatest value to the children it was almost altogether disregarded. In response to my inquiry, teachers in these schools said that it was impracticable to do much in the way of nature study except in those schools on the outskirts of the city where nature could conveniently be studied at first hand. This is an unfortunate state of affairs. The normal child lives close to nature, and the natural curiosity which he has concerning the mysteries of life and growth may be made a powerful instrument in securing and retaining his interest in the school. If he is unfortunate enough to be living apart from the brooks and trees, the birds and flowers, and all the fairest of nature's "visible forms," the school can in no way accomplish a more worthy mission than by occasionally bringing him into contact with these things. Interest is the *sine qua non* of success in every schoolroom. Comenius teaches us, and



every good teacher knows, that there is no more of obtaining interest in a schoolroom than its nature.

In the department of manual training, judging from the standard of most cities of corresponding rank, Buffalo is far behind the times. The city is sadly in need of a manual training school for the express purpose of fitting young men for the various trades and technical institutions. Such a school would be a priceless boon to thousands of poor people and would be an act of philanthropy well worthy of the city. At present, work in this department is carried on in the basement of one of the high schools crowded into the basements of various grammar schools in different parts of the city. Not all the pupils receive any by manual training of any sort and a very small experience in shop work. Sewing is taught to the girls in the schools and very satisfactory results are obtained in all the branches of domestic science have been neglected. This work would be of great value in many of the schools.

Buffalo can boast of three high schools well equipped with an able corps of teachers. As in all other high schools the courses are necessarily more or less adapted to the requirements of the regents' examinations. Kindergarten schools are established in different parts of the city and this branch of work is gradually growing in efficiency.

The central figure in every school and school system is the teacher. In some of the schools visited in Buffalo the standard seemed to prevail universally among the teachers. In others the standard was as uniformly low. In the schools already alluded to, a spirit of cheerfulness and enthusiasm pervades the halls which is delightful. What a blessing such a spirit is to the little foreigner who comes within its influence, ragged, to be instructed in the language and customs of the adopted country!

Much credit is due to the hundreds of earnest, self-sacrificing men in Buffalo who are laboring on, year after year, in the work of moulding the minds and characters of the young. They are in the charge to upright, useful citizenship. They are doing their work quietly, attracting very little notice from the outside world. Let the people remember that upon them more than upon any other class depends the future of Buffalo. The school system of the city should be a matter of vital interest to every citizen and as every good man loves his home and children, he should keep them sacred from the corruption of the outside world. He should guard the school system of his city and keep it free from political control and influence.

## *The Best College: What Is It?*

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ACCORDING to the most reliable educational statistics available, there is each autumn an army of young men and women, roughly twenty-five thousand strong, marching on our colleges and universities to enroll in their entering classes. The horde does not present an unbroken front, since it is divided into nearly five hundred separate columns, each headed for the institution of its choice. This annual migration of prospective freshmen to our seats of higher learning means much to us as a people. Upon it depends in no small measure our hopes for literary, scientific, and even economic greatness in the future. Yet paramount, perhaps, to our interest in the move, as a whole, is our solicitude for the welfare of some single column. We may have marched in it ourselves not so long ago, or, maybe, are teaching our own boys and girls the step. If the latter be true, it is a matter of no small consequence to us just where the particular column which they enter is headed.

It is, in fact, a much more important matter than it was a half century ago. To be a college man in that day was to be in a class all by itself, and not a very large class either. The mere fact of belonging to it carried sufficient prestige to place one well up on the ladder of success in almost any of the higher callings.

All the half hundred or so colleges were of a single type, differing very little from one another in curriculum, and to no very marked degree in cultural influence. To-day conditions are different. Institutions of higher learning have multiplied tenfold in number and a hundred fold in degree of differentiation. The present age of specialization has reacted upon the colleges,—whether wholly for the best or not I should not wish to say,—and the old single educational prescription has been replaced by a multitude of formulæ, each adapted to a particular need. Some of them have worked well, while others have not,

and the result is that the college diploma no longer passes current with the mass of the American people as a receipt for success,—that is, an indication of success already achieved, as it did when the liberal education was practically an end and not a means,—but rather, if I may continue my figure of commercial paper, as a promissory note, all hope of payment depending upon the ability of the holder to collect. Although the signer is not the payer, he, nevertheless, stands in the position of endorser; and to-day when there are five hundred such signatures available it is a matter of no little importance whose we get. There were at the beginning of the present century roughly 345,000 of these promissory notes of success, signed by college presidents, held in the United States, some pretty well paid up,—though it would be difficult to say when any one of them is canceled in full,—some with a partial payment or two already made, and others without any attempt at collection.

There are, however, at the same time, a hundred times as many men and women without any official promise of success on paper who are after it along the same lines as their college-bred competitors, and who have, moreover, just as good right to it if they can make the collections. They have, to be sure, only what might be considered a verbal I. O. U. in the place of the college man's officially signed instrument; but if they can force a payment they are entitled to the proceeds, and the college paper is likely to depreciate in consequence through a shortage of available funds.

Biographical studies of American citizens who have achieved success in the widest measure lead us to believe that, all other things being equal, the non-college man is handicapped in his struggle with a college-bred competitor for recognition along most lines of broadest influence. In the so-called learned professions this is especially true, and in many other callings of a semi-professional character figures support us in our belief. But to-day with our multiplicity of higher institutions of learning, each open to all comers who are properly qualified, the question of "which" is no easy one to answer.

In attempting to do so questions of expense need have but little weight, for the fact is demonstrated each year again and

again that good health, grit, fair intellectual ability, and an average preparation are the only prerequisites to graduation at any college in the land. Family traditions and obligations, as well as proximity to home, determine the selection of a college in many cases, irrespective of other reasons; but in a vast majority of cases a given institution is chosen because in the opinion of someone whose decision in the matter is final it is best.

The exact conditions which contribute to that superiority which determines the judgment vary with the persons making the choice. In the opinion of some, the small college is best; of others the large. Only a denominational institution will do in some cases, while others will have none of it. Coeducation and segregation of the sexes, geographical location and size of town in which the college is situated, all enter into the problem, with plenty of valid arguments in favor of all hypotheses.

It is with this problem of the best college, and I am using the term college as meaning an institution granting the bachelor's degree in arts and sciences, under whatever name, that the present paper deals. The term is used too in its generic sense, reference to particular institutions being introduced only for purposes of illustration.

In so far as the figures upon which the study is based carry validity, it attempts to answer the questions suggested in the preceding paragraph. Which is the best college: the large or the small? the denominational or the non-sectarian? the coeducational or that for a single sex? the one in the large city or the small town? In what part of our country do the colleges seem to be best? For the purposes of the study I shall assume that the best college is the one sending out the largest percentage of its graduates to fields of broadest usefulness. Not the one necessarily which coincides with our idea of the kind of college which ought to be best, but the one which in our present conditions of American civilization works best; that is, contributes most largely in proportion to its size to general culture and progress. An exact measure of this contribution on the part of any single institution is manifestly impossible. We cannot hope to evaluate a Longfellow, a Horace Mann or a Roosevelt,

nor to set up an elaborate scale which might fully as the basis of a marking system for degree of usefulness. It is possible, however, at least in the case of a small group, to assure a measure of justice to all concerned, to assure a success which might be taken to mean great success in a broad field; and by comparing those who exceeded that minimum with the whole number of those who have done so, to establish a numerical relation. This is followed in the present paper. The criterion of success which we have made use of is mentioned in *Who's Who in America*, an annual biographical cyclopedia of living Americans, published in Chicago. This criterion I shall not suppose to be perfect. I am fully aware that it is open to criticism, but it is a better one than that can be applied to large numbers of individuals. The particular volume of *Who's Who in America* for 1900. It contains the names of 8,602 Americans. At the beginning of that year, 3,237 of whom were college graduates.

Of the nearly 200 colleges from which 100 graduates received their bachelor's degree, I have only taken 144. I retain the number of living graduates for 144 colleges, however, includes all the colleges in the United States of considerable size or reputation. Neither of the two great educational institutions—West Point nor the University of Chicago—were included, since competition for public honor would not be the same among their graduates as those from the other colleges. Nor was the University of Chicago, because of its determining in some cases whether graduates of the present institution or its predecessor of the same name. Of these 144 colleges there were found to be 100 graduates.

This represents the entire number of their graduates (who might have been mentioned in *Who's Who in America*) who achieved the success essential to such mention. The number that number were, however, so honored = .88 each 10,000. This represents our ratio of success. The criterion made use of, for all the colleges studied, however, answer the question, Which college

In attempting to do so I have classified the colleges in various ways suggested by the questions already stated, and shall discuss their classifications separately.

First, Which college is best as to size?

In the table given under this paragraph, as in the others which follow, the characteristics being compared are in the column at the left; the number of colleges possessing that characteristic, next to the right; the total number of living graduates of those colleges next; the number of those living graduates who have found place in *Who's Who* next, and in the right-hand column the percentage of living graduates who were so honored. In the classification of colleges as to size, the total registration for the academic year 1899-1900 was taken and these divisions made: First, the college with less than five hundred students; second, that with between five hundred and one thousand, and third, the college with more than one thousand students.

TABLE I  
CLASSIFICATION AS TO SIZE

|               | Number of<br>Colleges | Total Number<br>of Graduates | Mentioned in<br><i>Who's Who</i> | Percentage<br>Mentioned |
|---------------|-----------------------|------------------------------|----------------------------------|-------------------------|
| Below 500,    | 85                    | 67,387                       | 953                              | 1.40                    |
| 500 to 1,000, | 26                    | 34,810                       | 328                              | .94                     |
| Above 1,000,  | 33                    | 157,617                      | 1,371                            | .86                     |

A glance at the table shows that from the standpoint of our criterion the small college is best. Although the figures seem conclusive, the honor roll for the small institution being nearly double that of the large, there are, nevertheless, certain facts which should be taken into consideration. Within the total enrollment which is made the basis of classification as to size is included both graduate students and those who are working for a professional degree. While this is true for all three of the classes, such students are for the most part connected with the large universities which are included in the second and third. Although these students not matriculated for the bachelor's degree might increase the enrollment sufficiently to place an institution in the class of large colleges, they would not contribute to the number receiving that degree and consequently would not figure in our tabulation of successful men. Whenever total

enrollment differs materially from the number of undergraduat students, this fact must be considered and it would be found mostly under classes two and three. Another factor of considerable influence, tending to reduce the percentage of "success for the large colleges is their rapid growth during the last decade. A careful study of the Who's Who names shows almost none of college graduates of less than ten years' standing. This fact practically excludes all those since the class of 1890 or thereabouts, while for some institutions, notably many of the state universities of the West, the major part of their alumni are of later classes. This fact would work no hardship save in cases where the rapid growth meanwhile carried the institution from the class of small colleges into that of large. In that case the classification would be for the latter condition, while its representation in Who's Who would be practically for the former.

How much allowance should be made for these facts I cannot say. Not enough it seems to me to account wholly for the advantage which the small college seems to have as shown by the table. Although a study of individual institutions shows that Harvard and Yale—leaders for the large colleges—far exceed the average for all in percentage of successful graduates, there are no less than nine from class three which considerably surpass them in that particular, and the second at least of the influencing factors discussed cannot be applied in these cases.

Second, Which college is best from the standpoint of sectarian affiliation?

This question is not one of distinction between the religious and the non-religious college, if the latter exists, but between the sectarian and the non-sectarian. The two are not synonymous. In spite of much that has been written to the contrary, "pure religion and undefiled" is found pretty fully permeating institutions considered in both the classifications of table two. What we want to find out is whether those virtues, intellectual, moral, ethical and religious, which most conduce to a wide influence in a broad field are best inculcated in the nominally sectarian or the nominally non-sectarian institution. In the table no account is taken of the separate denominations, all being classed together under "sectarian."

TABLE II  
CLASSIFICATION AS TO SECTARIAN AFFILIATION

|                | Number of<br>Colleges | Living<br>Graduates | Mentioned in<br>Who's Who | Percentage<br>Mentioned |
|----------------|-----------------------|---------------------|---------------------------|-------------------------|
| Sectarian,     | 75                    | 75,476              | 585                       | .78                     |
| Non-sectarian, | 69                    | 184,367             | 2,070                     | 1.12                    |

There are, it seems to me, no special factors, as was the case in the preceding classification, which would tend directly to invalidate these figures. It will be seen, however, by a comparison of the number of institutions under each class with the number of living graduates, that those put down as non-sectarian average much the larger as shown by the number of graduates, nearly three times as large, in fact. From this we might infer that the conditions affecting the large college would be of influence in the case of the non-sectarian. The inference would not, however, be entirely valid, since the present enrollment is not here considered, and unless the colleges which are making rapid growth are for the most part the non-sectarian, the discrepancy in numbers of living alumni would not prove an influencing factor. We are, it seems to me, safe in assuming that so far as our figures show anything they show that the non-sectarian colleges as a class are best. It is, however, only fair to state that the two individual colleges standing at the head in our tabulation were both of the other class.

Third, What college is best from the standpoint of sex of student body?

This question takes us into a field in which comparisons are perhaps less valid than in most of the others. Our presupposition was that all our two hundred and fifty thousand and more living graduates were equal competitors for success according to our criterion. This is not wholly true, since woman has not to any considerable extent entered the fields which are most likely to be productive of Who's Who honors, and women graduates were extremely few at a time—twelve or more years ago—when it would have been necessary to have graduated in order to attain them at all. Woman's greatest successes—second not a bit to those of the men in importance—are along lines which do not bring them into the public eye, and it is without a thought of disparagement that I say that from the standpoint of our present study they are a negligible quantity.



The comparison of value in connection with the third table is that between classes one and two, and resolves itself practically into an answer to the question, Which is the best college for men, that for the one sex or the two?

TABLE III  
CLASSIFICATION AS TO SEX OF STUDENT BODY

|                | Number of<br>Colleges | Living<br>Graduates | Mentioned in<br>Who's Who | Percentage<br>Mentioned |
|----------------|-----------------------|---------------------|---------------------------|-------------------------|
| Coeducational, | 94                    | 138,247             | 802                       | .58                     |
| Male,          | 46                    | 114,660             | 1,839                     | 1.60                    |
| Female,        | 4                     | 6,736               | 14                        | .03                     |

There is a sufficient difference between the percentages of success for the coeducational institution and that for the male sex alone to seem to indicate a pronounced advantage for the latter. We cannot, however, accept the figures as expressing an exact numerical relation between the efficiencies of the two classes of institutions.

In order to arrive at such an exact relation, it is necessary to take into consideration the fact that the women graduates form no inconsiderable part of the total number of living graduates of the former class, while they contribute but slightly to our criterion. If, however, we deduct from the total number of living graduates of coeducational institutions one fourth, about the proportion of women in them according to present registration, we still have a sufficient preponderance of success in favor of the college for men to lead us to believe that they best fulfill the requirements of a modern civilization as we have somewhat narrowly defined them.

Fourth, What college is best, that in the small town or the large city?

The standard which I have arbitrarily chosen for the large city is that of thirty thousand population. It might have been placed lower or higher, perhaps, with equal justice; yet it has seemed to me that at somewhere near that point in the growth of urban population those characteristics which are peculiar to the smaller centers are for the most part obliterated, while others which are given rise to by the social demands of large cities begin to make themselves conspicuous.

TABLE IV

CLASSIFICATION FROM THE STANDPOINT OF THE SIZE OF COLLEGE TOWN

|                              | Number of<br>Colleges | Living<br>Graduates | Mentioned in<br>Who's Who | Percentage<br>Mentioned |
|------------------------------|-----------------------|---------------------|---------------------------|-------------------------|
| Less than 30,000 population, | 115                   | 150,236             | 1,494                     | .99                     |
| More than 30,000 population, | 29                    | 109,607             | 1,161                     | 1.06                    |

Although this table shows the advantage to be with the college in the large city, upon the strength of the slight difference between the two classes (.07 per cent) one would not wish to dogmatize with regard to the magnitude of that advantage. Much has been said and written upon the subject, and each one of us has, perhaps, his own private opinion in the matter. Since, however, the figures here given throw very little light upon it, there is no call for a further discussion.

Fifth, Where are the best colleges of our country found?

In attempting to answer this question from the empirical basis of our study, I have divided the country geographically into five sections unequal both territorially and in the number of colleges, yet in such a way as to bring together in a given division those states which seem to possess to the greatest extent common characteristics. These divisions are: first, the New England States; second, the Middle States, comprising the other states east of Ohio and north of the Virginias; third, the Southern States, including those south of the Potomac and Ohio Rivers, together with Missouri, Arkansas, Louisiana and Texas; fourth, the Central States, comprising all those not mentioned to and including the Kansas-Nebraska tier of states; and fifth, the Western States, covering the entire western portion of our country. The tabulation is as follows:—

TABLE V

GEOGRAPHICAL DISTRIBUTION

|              | Number of<br>Colleges | Living<br>Graduates | Mentioned in<br>Who's Who | Percentage<br>Mentioned |
|--------------|-----------------------|---------------------|---------------------------|-------------------------|
| New England, | 19                    | 53,620              | 1,116                     | 2.08                    |
| Middle,      | 26                    | 77,310              | 751                       | .97                     |
| Southern,    | 38                    | 39,799              | 271                       | .68                     |
| Central,     | 55                    | 79,934              | 447                       | .59                     |
| Western,     | 6                     | 7,135               | 39                        | .54                     |

So far as these figures carry weight, there is no questioning their decisive declaration in favor of the New England college. In justice to all, however, we must go behind them. As has

already been stated, our criterion of success practically preclude the possibility of its attainment of less than ten years standing. This portion of the country in which higher education most rapidly must of necessity have the largest alumni who by reason of a virtual age limit have the best chance for success. That portion of our country so covered by our last two divisions, in which the chance of success, according to our criterion, are the smallest, the total number of students registered in the universities of our country was 46,131, of whom 13,131 were there. In 1900 the total number was 46,700. This disproportion between the Western states has swelled more rapidly for the last ten years, the number of graduates, without affecting in any way the percentage of graduates in *Who's Who*; and since our percentage is found by dividing the latter quantity by the former, it tends to decrease it. The fact too that the colleges are more generally coeducational than are those of the East tend to produce the same effect, and is a matter to be considered before accepting as valid any exact numerical comparison of women graduates figure in the divisor, though it is the dividend of our mathematical calculation, with the result of a reduction of the quotient.

How much we should modify the figures of "percentage of success" column I am not prepared to say, but it is left to the reader. The study of individual institutions, however, lead me to believe that it should be taken from the New England colleges the least of the twelve colleges standing at the head in percentage of successful graduates (varying from 4.1 to 2.6 per cent) from that geographical division.

A summarization of all the conclusions of this paper would be covered by the statement: "The college seems to be the small, non-sectarian college of a New England town of more than 30,000 inhabitants." I do not, however, expect anyone to take this as the matter. I do not myself.

## *Some Readjustments in Secondary Education*

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SECONDARY education is here defined\* as the period of training between the elementary school and the schools of law, of medicine, of theology, and of technology. It will therefore include the high school and the academy, and the college, or so much of these as is not devoted to primary or technical instruction.

The present situation in secondary education is unstable and consequently in process of evolution. New features and new forms may be confidently expected, and that right early. Let us observe the facts in the case.

The Yale Corporation has recently been petitioned by the School of Law of that university, requesting that a certain portion of the college curriculum be devoted to subjects heretofore taught in the Law School. The minimum so desired is fifteen hours per week or a year's work, but more than this would be acceptable. The petition brings out the fact that at present prospective students in medicine and theology in Yale College can devote one year of their college work to subjects leading to their chosen professions, and thus anticipate one year of professional study. The undergraduate can, therefore, devote 25 per cent of his academic career to professional work. The same conditions under slightly different circumstances prevail in every other university. For example, at the University of Michigan combination courses are offered, devoting six years to a course leading to two degrees,—the B.A. degree, signifying the completion of a course in secondary education, and the M.D., or LL.B. degree, signifying the completion of a professional course of study.

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\* This definition is based on President Hadley's address before the Association of Colleges and Preparatory Schools of New England in October, 1902.

This encroachment of the professional school of the college has gradually undermined our conception of the college and threatens its very id the time allotted to secondary education in possibly to two years, must result in some race in college programs and invites the high school to a splendid vision of expansion and growth. Secondary education can be safely and profitably reduced to our present high school course. Freshman and sophomore college years, the high school and academy will be able to meet all demands for secondary education, and a new struggle will be on between the high school and the college.

But can secondary education be given in two years? Is it merely a question of time, or are there other considerations before a decision can be reached? Chief considerations will include most of all the problem: the time which can be devoted to the period of education; and the content of that period.

The struggle between college and professional school is in the time element. It is but one phase of the movement for what is practical in education. The college has shown a disregard for culture and placed a premium on the ability to perform. It has exalted the hand over the head, the hand and the heart." It was before, that the secondary period of education suffered by this movement. For secondary education is concerned with what is only indirectly related to the practical, neglected the hand entirely in the past and devoted exclusively to the head and heart. Consequently the physician to his patient, the lawyer to his client, the minister into his pulpit and the engineer to his task, at an early age, the respective professional schools have taken a part of the secondary period.

While many of the arguments which favor a reduction in the period of secondary education are valid, the justification of the shortened period must be on other grounds than those of the impractical.

and fourth college years are unpractical, they are no more so than the other years of the secondary period. Not secondary education as a whole, then, is called for trial, but its content and range.

The subject matter of secondary education has been subjected to frequent and pronounced changes. Time was when the whole realm of knowledge could be and was included in the curriculum of a small college. But the development of the exact sciences has expanded the field until there is a bewildering variety. While the old fixed curriculum of the past could inform the student on every subject of knowledge with some thoroughness, the present elective course presents so many possible lines of research that the individual student can do thorough work in a fractional part of it only. This variety of subjects offered has led many students to divide their energies. It has turned out men who were thoroughly informed upon no subject but had much undigested information on many various subjects. It was confusion in variety, and has somehow left an impression on many minds that the college stands for "nothing in particular, for everything in general." No doubt the "group system" now in force at Yale and several other universities will serve to give greater unity to every student's work; but while the confusion lasted it discredited college education and invited assaults upon its integrity.

The first assault came at the hands of the professional schools. When these were pressed for time they each demanded that a certain proportion of this seemingly incoherent college curriculum be devoted to their own specialized branches of knowledge. And how far this demand has been met has been indicated above. The junior and senior college years, for prospective students of law, medicine, etc., have ceased to be part of secondary education.

But why has the close of the second college year been chosen as the dividing line between secondary and professional training? That it has been so chosen is conclusively shown by the facts cited above as well as by President Butler's demand for a two-year college course. Has the choice been arbitrarily dictated by the professional school, or has educational experience

pointed the way to it? That it has not been a the professional school is evidenced by the fact have readily acquiesced and have even led in make the junior and senior years count toward a professional degree. It is educational experience marked line of cleavage between the second and third years. The studies of the first two years are more than special, elementary rather than advanced and are essentially different from the studies pursued in the last two years, on the other hand, take more special and individual interest, and the third year is more intensive, whereas in the first two years it was not.

We may illustrate this difference in subject matter by almost any course offered in our colleges. The freshman and sophomore study geology, the junior and senior study blowpipe analysis; the freshman and sophomore study European history, the junior and senior study the constitution; the freshman and sophomore study thermodynamics. Or, in other terms, the work of the first two years is at a general and liberal education, while that of the last two years aims to produce the specialist.

Nor is it incompatible with thoroughness to have any period of education with the sophomore assume that Latin holds a deservedly high place in liberal education. What can be accomplished in six or seven years ending with the sophomore? We can acquire the ability to read and write Latin, to read a goodly portion of Latin literature—historical and lyric poetry, and specimens of the Roman orator can adequately treat the subject of Roman antiquities if we maintain is a thorough treatment of Latin, but not to produce the specialist in Latin. And equally good ment can be given in these first six years of the period to English, mathematics, physics, chemistry, history, and the history of philosophy. The distribution for each subject does not belong here, but the discussion on “grouping” the secondary studies

The facts in the case force upon us the conclusion that theory and practice are converging. The evidence from educational experience shows that a liberal education can be given in six years, beginning with the first high school year. And the practice of our colleges and universities is to virtually end the secondary or liberal period with this sixth year. That is, theoretically, we recognize a distinct difference in method between the early and late part of our college work, and by bringing technical studies into the last two years we likewise recognize a difference in subject matter. Now this situation is anomalous. Our college course is partly secondary, partly professional or technical, and there is a pronounced unwillingness to make the form agree with the substance. It is nevertheless prophetic of a change, a readjustment of the secondary field, and the readjustment will be of vital importance to the high school if not to the college also.

The college of the future will have to recognize that its students naturally divide into two classes—a smaller number of enthusiastic spirits who seek culture for its own sake, and a larger number which look forward to the practical life of the lawyer, physician, or man of affairs. For the former, the college must provide a training that makes for breadth of view, refined taste, and cultivated feeling. This class will study literatures, history, the fine arts, and help to produce the atmosphere of culture and “sound learning” which makes the college what it should be. For the latter class of practical mind, the way to professional study must be opened at the close of the sixth year. It is this class which has brought our colleges a class of idlers, who have no scholarly purpose, but are marking time until they can enter professional study. To recognize the cleavage line at the end of the sophomore year will be to foster a spirit of earnest work in this class, while to compel them to linger over unpractical studies is to encourage superficial work and idleness.

For the college, then, the suggested, and we believe inevitable, readjustment in secondary education will not necessitate any change of organization. It will, however, bring the professional school into closer union with the college, and this will



be a gain in itself if it will keep the professional student in the college atmosphere the full four years. He will in this way gain the advantages of the academic life which every college man so fondly cherishes, and yet be able to get into his profession two years earlier than under the old system. We need not grant the B. A. degree at the close of the sophomore year as some have urged. Much, if not all, of the strictly professional work has culture value, and the degree in arts may well be withheld until the middle of the professional course. We shall in this way retain the old college outline with a new definition for its content. We shall thus hold fast to that which is good in the college, and so readjust the curriculum that we obviate its weaknesses.

We must recall at this point that the high school and college have been occupying the field of secondary education in common, and any readjustment in this field will be of vast importance to the former. As soon as we recognize that both theory and practice set the limit of the secondary period at the close of the sixth year, we see the possibility of an enlarged sphere of usefulness for the school. Now the high school is a public institution and must render the highest possible service to its constituency. Whether its sphere of service can be enlarged so as to give a six year course effectively and economically depends upon three factors: the character of the newly defined secondary instruction; the equipment of the school; and the attitude of the public.

The subjects which properly belong in a high school course and freshman and sophomore college years show uniformity; and the method of treatment is similarly uniform. We shall leave out of the discussion here business and manual training subjects, since they find place in a secondary program for utilitarian reasons and cannot affect our present discussion. The six year period indicated includes instruction in languages and literature, mathematics, the sciences, history, economics, and philosophy, and there is scarcely any division of labor between school and college. Their instruction is parallel in the majority of subjects. In the first group, languages and literature, the college gives in advance of the school, instruc-

tion in Latin, and Greek, and English, while in German and French there is no advance. In the mathematics group the instruction is the same in school and college, save that in rare cases the calculus is taught in sophomore year. In the sciences the instruction is parallel. In the history group, ancient, mediæval, English, and American history are included in both school and college course, and the college sometimes gives in advance of this a course in modern European history. In economics, only elementary instruction is given and by both institutions. The same is true of philosophy. In brief, two years of Greek, Latin, and English, respectively, the calculus and modern European history are the only subjects of college freshman and sophomore years not taught in the high school. And these subjects are as a matter of course of the same character as those taught in the school and can safely be included in the school program.

The method of treatment varies even less than the subject matter. The aim in school and college is to bring the student into contact with as many phases of the subject as is consistent with thoroughness. Each subject is viewed in its extension. Both school and college study general outlines rather than specific parts. It is this singleness of purpose in secondary teaching which gives unity to the period and distinguishes it sharply from junior and senior college years, where particular phases of a subject are intensively treated.

Since there is this marked parallelism between school and college work and no rational division of the field, greater or less confusion is inevitable. One source of confusion is the lack of agreement between the colleges as to what should be taught during the first four years and what reserved for the fifth and sixth. We cannot, for example, teach all the histories in the last school year, and yet so various are the demands from the colleges in this respect that the best results could be attained that way; that is, in history. But for another college, algebra should be taught in the last year, for another, geometry, for another, physics; and yet the work in Greek, Latin, English, French, and German demands a part of this last school year. All this tends to destroy gradation and proportion in the school program and makes some of the work incoherent.

We are thus led back to our original postulate that there is no dividing line between school and college either in subject matter or method. The very fact that one college teaches its sophomores what the other makes a condition for entrance, and *vice versa*, bears evidence to this. We are now insisting on an

arbitrary distinction between school and college a natural division between the sixth and seventh years. Before it will bring greater economy and efficiency of work to give the high school a complete second six years.

In material equipment the school is ready to enlarged service this will demand of it. There has been an enormous increase in the efficiency of the system. Large, modern buildings have been erected and provided with the latest apparatus, and the quality of instruction has annually improved. The equipment is magnificent and equal to the best. The public is ready to a generous use of its money for school purposes and are in a position to do work of a sort undreamed of a generation ago. In fact, the material equipment of the high school of the present could not be compared with the college of the generation except to the disadvantage of the latter. It may be said of many small colleges to-day.

And this statement of what the public has done for its schools sufficiently characterizes the public attitude toward education. It shows further, however, that these excellent facts are not shared by the public, that the number of pupils completing the high school course is growing each year. There is evidence at hand that a high school training is now in the possession of the majority. In New York state the number of the school age to the sixteenth year virtually equals the number of the secondary education compulsory. The public is not only willing to receive but even ready to demand more from the high school can render.

We have then three significant facts. The public demands a secondary education is in theory and practice six years. The high school has been equipped generously so that it is capable of giving a complete secondary education with economy and the public is demanding the best service of which it is capable. If we interpret these facts correctly, the high school of the future must give its constituents a six year course and so complete the secondary education training. It will in a measure give to the majority what the college of the past gave to the few. It will raise the level of culture for those whose training must end in high school. It will give this class broader sympathies and make them better for the duties of citizenship. This is the true and patriotic citizens, must be the one grand principle of the public school system, and it demands a broader and therefore longer high school course.

## *Two High School Reforms*

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WO reforms seem to me to be immediately practicable: first, the shortening of the public school course to eleven years for those who expect to enter a college or technical school; and second, the introduction of greater flexibility into our high school curricula through more liberality in electives.

The first can be obtained by making the eighth grade an integral part of the high school, and distributing the work in the common branches that cannot be done in seven years through three or four years of the high school course. To illustrate: suppose the student carries in his eighth year in school first year work in algebra and Latin, English classics and composition writing and physiology; the ninth year, plane geometry, second year Latin, English grammar and classics, and a modern language, or chemistry, or ancient history; the tenth year, one half year each of solid geometry and algebra, third year Latin, one half year each of rhetoric and civics, and second year of a modern language, or modern European history, or zoology; the eleventh year, fourth year Latin, physics, United States history, and the third year of a modern language, or another year of science,—then he will have made the preparation in the fifteen units required for admission to such a representative institution as the University of Chicago. It is not intended that the order just given is the most desirable, but it is only one that a student might select under the system which I shall explain more fully in another paragraph.

This plan will necessitate a slight readjustment of the work in the lower grades, but will be easy to install under our present organization. It will require a somewhat more extensive course in arithmetic in the seventh grade, but less intensive; instead of the more difficult work now attempted to percentage or interest, work illustrative of principles covering all the important phases of percentage and the elementary problems in mensuration would be given. Instead of beginning a difficult text in United States history in the seventh grade and completing it in

the eighth, an intermediate text could be used in the seventh grade. These two subjects are the ones usually continued through the seventh and eighth grades in the same text-book under our present schedule.

Who will question seriously the advantage of teaching English grammar after a year of Latin or some other foreign language; or the advantage of teaching the root of numbers in the regular course of evolution; or the ease with which a class will carry a course of United States history after a two years' study of mediæval and modern European history; or the ease with which the work in higher arithmetic and algebra, or algebra and geometry have been made possible by the tremendous advantage to be gained by taking advantage of the high school instructors, with high school methods and a well equipped laboratory? It is safe to assert that the experience will recognize and admit these advantages.

The question that now arises is whether students can do first year work in algebra, Latin, and other languages in their eighth year in school. I can assure you I have seen it successfully done in schools under my supervision. From reports where it has been tried in various parts of the country, we may safely assume that it is entirely practicable for students thirteen or fourteen years of age with seven months of preparation to do this work. While this scheme is partially carried out in the plan suggested a year ago by President Harter and the Board of Education, and thoroughly discussed at the Chicago conference a few months ago, in which they suggested dividing the public school course into two periods of study, the elementary and high school work, and thus making the high school to cover the work of the first two years of the present course as now arranged, it has the advantages of being entirely practicable with our present buildings and does not assail the small college. In many cases it could be made without additional room for the high school; in many others it might mean utilizing more of the high school building; and in still others it might mean a new building erected would be for high school instead of college.

poses. In many cities of from 3,000 to 12,000 people, all or a portion of the eighth grade pupils are housed and taught in the high school building; in such cities the only change would be in special instructors in the various subjects instead of a teacher in charge of a room teaching all the subjects of the grade.

Another great gain from this plan would be the more efficient instruction obtained in the eighth year in school. In many cities of the country the high school instructors are selected entirely from people of college training, thus insuring a higher average of excellence than in the grade teachers. This statement is made with no intention to criticise the noble army of workers in the grades, for it can be safely said that the country at large gets more than it pays for from the persons in these positions. In all cities higher qualifications are exacted for high school instructors than for teachers in the grades, hence we can reasonably conclude that a gain would be made in this plan.

With regard to the question of the flexibility of the high school course, it might be stated that some experiments have been made and more have been suggested. The high school has been called the "people's college," and, in my opinion, some changes ought to be instituted to make it in fact what it is in name. As now organized, the banker, merchant or lawyer in any village of 2,000 people can have his son or daughter prepared for Princeton or Wellesley, but the poor widow who needs the help of her boy at the earliest possible age cannot expect or hope that he can obtain some knowledge of carpentry or forging so that afterwards he may pass through an unprofitable apprenticeship in one year that would otherwise require four or five; nor can the girl who has ambition to become an expert housekeeper or homemaker expect to receive training in domestic science or economy but must submit to the allopathic doses of Latin, Greek, French, and German if she expects to continue in the high school. It seems to me that this latter and larger class of students deserves consideration as well as the former. While it should be the function of every good high school to prepare those students for a college or technical school who wish to go on, yet the small per cent who do this should not dominate the policy of the high school.

In general, a course of study is an arrangement or schedule of subject-matter,—unfortunately, we might add, commonly supposed to be taught to or at least gotten into the child in some way. A good or sensible high school course of study is a certain selection and arrangement of subject matter, which material as arranged will best excite the initiative of effort in and maintain the interested activity of the pupil, and also keep him in close possible touch with the life problem and give him the maximum amount of power and adaptability to meet that problem. I realize that this must be vitalized by the personality of the teacher. Viewed from one standpoint the teacher is all, yet it must be admitted that there is some good wholesome discipline to be gotten out of the interested activity of the pupil with geometry, science, the languages, carpentry or domestic science, and even with the most inspiring teachers these will all have their important place in the training of the individual.

The well organized American high school has a twofold function: First, to give a liberal education and training to the very large per cent who never go beyond it; and second, to prepare those who wish to go on for entrance to some college or technical school. The major function is to educate liberally and train as thoroughly as possible the large majority for which the high school is a finishing school: the young men who go into business, to the law or medical schools, into the machine shops or the trades; the young women who go into the homes, into the schools, into the stores and offices. We must give them the power of adaptability, the power to think and to do. For the college preparatory student we are expected to do the same, but with certain stated “doses” of mathematics, Greek and Latin. I submit that there ought to be no essential difference in subject matter necessary to give this resultant of training, and believe that the day is fast dawning when a more liberal system of electives than now prevailing will be permitted for college entrance; when a student may enter the first year of college work without a knowledge of Latin and take that subject in the college in lieu of other subjects usually taken there and which he may have studied elsewhere.

Something has already been indicated of the plan of the curriculum. More fully it is this: A certain line of constants, and other elective subjects or groups from which the student may select under limitations not more than twenty or fewer than fifteen recitations per week, would make up the schedule of subjects; the course would consist of the constants and enough electives to make fifteen units for a four years' course. Or where deemed advisable to maintain a five years' high school course, eighteen or nineteen units might be required for graduation; each unit would represent one year's work of five prepared recitations of forty or forty-five minutes each, per week, or the usual equivalent in laboratory or shop work. It might be found desirable to have some two or three hour courses, but in my arrangement I prefer five recitation per week in all subjects.

There are at least seven general lines of subjects that should be taught in the good high school; viz.: mathematics, science, English, history and civics, languages (other than the English), manual or technical training, which would include carpentry and forging for the boys, and cooking and sewing for the girls, and commercial subjects including stenography and typewriting. Of these lines I would require or make constant one year of algebra, one year of plane geometry, two years of English, one year of science, one essay to be written each six weeks of the course, and two rhetorical exercises each year. The year of algebra should be completed during the first two years, and the two years of English during the first three years, and if physics be the science selected, it should not be taken before the third year of the course. It can well be seen that in a small high school employing from two to four teachers this list of constants would have to be increased from necessity, or rather economy; but it would be a working schedule in cities with a population of eight thousand or more.

I have specified these constants aggregating one third of the four years' work, in each case for a definite purpose. Possibly the strongest objection could be raised to the required work in mathematics, but from my observation and experience nothing can be substituted for it which will give the students equivalent



power for the time expended. I frankly admit that some of that value comes from its being better taught than many other subjects. In passing, it might be stated that the two subjects, mathematics and Latin, so strenuously insisted upon by the colleges for entrance, are the ones best taught in our high schools to-day. I do not pretend to assign a reason, but only cite the fact. The two years of work in English should be so taught that pupils may say what they have to say on paper intelligently and forcibly. This work properly taught along with the required work in rhetoricals should bring up the power of oral expression; and it should leave with the pupil a desire for good literature and, at least, a tendency to the reading habit. The one year of science, leaving the subject elective, is justified as a constant in that it gives a certain element of training that cannot be gotten so readily from any other subject; I refer to the power of close observation, of calculating results, of looking at all sides of a question. The prescribed essays are necessary that the students may be kept under the direction of the teacher of English and kept in the way of growth in their written work; and the rhetoricals, that the students may become accustomed, in a measure, to expressing their opinions in a convention, an assembly, or any deliberative body.

I have attempted in what has just been said to give some of the reasons for each of the required subjects, but to give a list of the electives and to justify them will be more difficult. This will be governed largely by economy. It might be stated as a general rule that no class would be organized in an elective subject unless there should be at least twelve desiring it, or in large high schools twenty or even the average number in the various classes. As soon, however, as a full class elect a certain subject then it does not increase the teaching force, as the pupils being taught, for instance, in trigonometry cannot at the same time be in another class. The danger to be avoided in high schools where from four to ten teachers are employed is in attempting to offer too many subjects.

Under this explicit limitation of the class having the required number before the work is given, some of the subjects might be mentioned that are worth while. In mathematics, one half year each of higher algebra, solid geometry, plane trigonometry, and surveying might be offered. The last subject, if offered at all, must be taught by a man who has chopped his way through the thicket, retraced old lines, found lost corners, and triangu-

lated across draws and swamps in the actual work. If you cannot get the sort of teacher who can, for example, take his class and do the engineering work in grading or paving the streets of his city and thereby let the boys know that they are doing something, leave out the subject of surveying and put in time on another that does not show so plainly when it is dead.

In language, if the school is large and maintains a five years' course, twenty-two years of elective work could be offered, two of English, five of Latin, four each of Greek, French and German, and three of Spanish. This amount would only be practicable in our largest high schools and would be decreased rapidly as the teaching force was reduced to ten or less; or in other words, more of the subjects will go over into the constant column until only four years of Latin remain of the twenty-two. With the large amount of elective work in language here suggested the limitation that a student could not present more than a given number of units, say eight or nine, of the fifteen required for graduation, should be made. The two years of English should be properly graded up from the required units in this subject and should include at least one half year each of English and American literature, and the purpose of the work should be to cultivate a literary taste and fix more firmly the reading habit.

In science, eight units should be elective, thus offering, with the one year required, two years each of physics and chemistry and one year each of geology, zoology, botany, physiology and astronomy. This amount of work should not be thought of, however, unless the school is well equipped to do it and there is a positive demand for it from year to year; the equipment and supplies make these lines of work expensive. In the smaller schools this should be cut down one half to two thirds. It should be stated that these courses must be general work in science and not on the order of the "original investigation" fad, to which a little more spelling and arithmetic would be preferable.

In history and civics, at least three and one half units should be offered, one half unit each of Greek and Roman history, one unit each of modern European and United States history and one half unit of civics; to this might be added one half year each of English and French history. Here it might be added that the "source method" had better be relegated to the university, where it belongs. To be sure, a library commensurate with the size and requirements of the classes should be at hand, and the students should be required at times to investigate some period or event in minutest detail, but this will not take

the place of the daily use of a text in the teaching of the high school. The pupil should feel that history is connected with the present, that he must learn from his knowledge of the people of to-day, and on the other hand, he must predict the actions of the people of to-day knowing what they have done in the past. He must study his history with the full appreciation that the people six thousand years ago were alive, were running, and were seeking power as they are to-day.

In commercial education, one half year each of geography, commercial arithmetic, letter-writing, and commercial law, one year each of bookkeeping and stenography, and two years of stenography and typewriting should be offered. This would only be practicable in large cities. Here again unless you can have a text which shows how books are kept in the best mercantile establishment, how the law is now with regard to contracts, and how paper is used, you had better leave these subjects out, and substitute disciplinary studies than antiquated bookkeeping, commercial law and geography. Well taught, these subjects have educational value as well as practically fitting the student for the counting room.

Five years' work in domestic science and home management should be offered, two of which could be laboratory or practical work in cooking and sewing. Rooms could be equipped for practice work for those who would probably elect this course for from \$400 to \$600, or an expense of \$1000 is required to equip a chemical laboratory in a high school. This department should offer courses in food and nutrition, of foods, theory of cooking, household sanitation, household economy, practice work in cooking all kinds of vegetables, breads, desserts, and ices, the measurement and tests for pure fabrics, drafting, and home management and sewing. Many of these courses are informative and their educational value would take the place of the present courses in history. The others are laboratory courses which would give the same elements of training that the laboratory in chemistry and physics now gives,—in fact, the practical practice in cooking, under a good instructor, develops discriminating judgment much more rapidly than the laboratory in chemistry. Its practical value cannot be questioned. The introduction into the high school of a city with a population of 100,000 years in an increase in the number of economic and well managed homes.

In carpentry and forging, as at present handled, there is not the opportunity for information courses that we find in the domestic science, but two years of shop work each in wood and iron should be given. The educational value of this work is now generally admitted; the beneficent influence on the character of the normal boy of making something or being able to do something useful is unquestioned. Accuracy and honesty are probably more forcibly impressed in this work than in any other school exercise; his work is a constant reminder of any inaccuracies and of any attempt at dishonesty. In all of this work, as in cooking, there is opportunity as in no other laboratory for the cultivation of judgment. The practical value need not be defended; it is settled that it shortens very materially the time necessary for learning a trade; the student is familiar with tools and deft in their use. This department can be fitted up for the students who would elect the work in a school of three hundred for \$500 to \$800; of course, many times this amount could be expended if wood and iron working machinery were installed, but this is not necessary or advisable, as this machine work properly belongs to the laboratory of the technical school for mechanical engineers.

These lines of work discussed in the last three paragraphs should be incorporated in some degree at least in the high schools of cities of two thousand or more inhabitants; and in many smaller cities, where there is a good school sentiment, they could be maintained. In the high schools of large cities, to have these departments in each school would be preferable to the present system of separate manual training, commercial, classical, and English high schools. The line of cleavage comes soon enough in society without crowding it down to the beginning of the high school course. I realize that there are arguments in favor of the present separate high schools, such as economy in teaching force and equipment, which reasons may make the ideal unattainable at the present time.

The first reform, that of shortening the public school course, at least for those who go to a college or technical school, will tend to preserve the small college whose existence at present seems threatened, and whose splendid influence we cannot afford to lose from our educational system. The second reform, that of the greater flexibility of the high school course through greater freedom in electives and the addition of certain lines not now usually taught, will put it in touch and sympathy with the people as it has never been before, and will greatly augment the educational value of the training given in our secondary schools.

## *The Pedagogy of the New Testament*

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IS it not more than a little strange that, with all our searchings after light upon psychologically correct methods of teaching, it seems never to have occurred to anyone to make use of the four Gospels or any part of them as a text-book in pedagogy? We speak habitually of Jesus of Nazareth as a great teacher; we recognize the fact that the titles "Rabbi," "Rabboni," given him by his followers and others meant simply "teacher," just the name by which those of us who have had the privilege of teaching for a longer or shorter period in a country school have been called by, over and over again; yet it never seems to occur to us to study the stories of his life or to recommend them to others as a source of knowledge of right ways of putting pupils into living relation with the facts and principles with which we wish them to become acquainted.

If we examine the works of the great writers on educational subjects, we shall find that when they have had something valuable to give to the world they have either been groping more or less blindly after the principles by which Jesus taught, or have, like Peter, been following him "afar off."

Socrates was a great teacher, and his method of imparting knowledge and stimulating thought by means of questions has long been studied as a model; but compare his most searching questions, even in the *Phaedo* or the *Crito*, with that of the Man of Galilee addressed to the lawyer, or the series addressed to the disciples regarding his own identity. When the latter passage came in the order of the Sunday school lessons a few weeks ago I asked my class, "Why did Jesus ask first, 'Who do men say that I am?' instead of the other question, 'Whom say ye that I am?'"

There was a moment's silence and then a thoughtful girl ventured, "Wasn't that the natural order? When we are asked a thing like that we're very apt to try to think what the general

opinion is instead of really giving our own. It seems to me that Jesus cleared the ground for his other question by asking that first, and having all those vague notions disposed of before he gave them the really important question."

Is it not true that his questions do follow the natural and logical order always, and that he never allows the men and women with whom he is speaking to dodge the vital issue, their own beliefs and duties; but pins everyone of them down to straightforward, honest thinking upon his own needs?

Then there was another excellent principle that used to be much emphasized when I was a student in the normal school, but which, judging from the helplessness in matters intellectual of a large proportion of the students that come to us from the grammar and secondary schools of the country, must now be held in abeyance, "Do not tell your pupils too much: get them to do their own thinking." When the lawyer asked, "Who is my neighbor?" and Jesus answered with the parable of the Good Samaritan, doubtless the lawyer exercised himself with some very serious thinking. He certainly was not allowed to go away remembering the story and forgetting the application.

It would be interesting to note the number of times that Jesus met an inquiry with another question, thereby causing the inquirer to think out his own answer. It is not after all surprising that the twelve Galileans went out to change the philosophy of the western world, and its entire outlook upon life after a three years' training under such a teacher.

Rousseau taught "the return to nature," the throwing aside of conventions, the treating every child as an individual. But all these things Jesus had taught long before and infinitely better than they have ever been taught since. He spoke to the thousands, but he never lost sight of the individual. He never cared what had been said "by them of old time," but always for the eternal verities, the hidden realities of life and things.

What teacher has ever made such free use as he of the objective method and of teaching from objects? This, too, without any elaborate paraphernalia or intricate apparatus; he took the thing at hand, the salt thrown into the village highway, the birds of the air, the grain of mustard seed, the sycamine

tree, the lilies of the field, the glow of sunrise or sunset, the winds, the mountains, the rain. Here too was nature study.

Throughout the three brief years of his ministry we find that he was developing and training the powers of his followers. "Virtue makes many warm friends but she never takes pupils," says "the Garret Philosopher," and perhaps in the methods of Christ with his disciples we may find a solution of the much-vexed question "Shall we teach ethics and morality in the schools; and, if so, how?" May I be permitted to say here, parenthetically, that no real teacher can help teaching them, and the most valuable part of her instruction is incidental. So it was with Jesus. He awakened the desire to know these things and then gave the needed help, rarely by direct precept, more often by question, parable, or object lesson, as on that occasion when "he set a little child in the midst of them."

"Study the great teachers," we are told. By all means; study Comenius, Pestalozzi, Froebel, the Oratorians, the Jesuits, the Jansenists, Thomas Arnold, and Horace Mann; but in our study let us not neglect the greatest of them all. The New Testament, especially in the gospels, has stored up vast wealth, spiritual, literary, philosophical, much of it unused, unnoticed. Why not, in all our searching after right ways of teaching, study more closely, from a purely pedagogical standpoint, the methods of the greatest of all teachers? Possibly less study of the New Testament as a collection of texts fitted to prove certain doctrines, and more careful seeking for the spirit and ways of working of its central figure, would go a long way toward remedying certain much-discussed faults of the Sunday school.



*Editorial*

**D**AY by day in the ordinary intercourse of the home parents are laying the foundations of the children's characters. In many homes little thought is given to the matter. Life moves on and records its lessons, and somehow the boys and girls turn into men and women. But in this realm, as truly as in our fields and gardens, careful cultivation produces marked effects, improving the quality of the product and greatly enhancing its value. Nowhere does it pay better to put thought and painstaking care into our work than in the bringing up of children. It is a pity that in so many cases there is merely a haphazard attention to this most important of all human interests.

In previous editorial paragraphs we have spoken of LOVE, AUTHORITY, and SYMPATHY as fundamentals in an ideal home. We wish to speak briefly now of the importance of TRAINING VERSUS COMPULSION in the education of the children. It is often easier to lay an absolute command upon the child than to lead him step by step to the point where he can see the subject in its true aspect, and make an intelligent choice for himself. But the latter method is manifestly the better one for the child. It develops his faculties, and prepares him for the time, which will come so soon at the longest, when he will not have his parents at hand to make his choices for him. Placing a measure of responsibility upon children at an early age, and gradually increasing it until practically all the matters affecting their personal life are referred to them for settlement, is the way to have trustworthy children; and to make them grow up into a noble manhood and womanhood. A child can be quietly influenced to choose the right course when compulsion would immediately prejudice him against it, and incline him toward the wrong. For instance, the matter of going to school may be put in such a light that for months before school age arrives the young child will be full of an ambitious desire to begin his school days; or a bugbear can be made of it until nothing but absolute compulsion will ever induce him to go, and no amount of that even will make him like it. A grave mistake is often made by parents in this matter. Again, many children have been forever prejudiced against church-going by being obliged to go instead of being taught to choose it as a privilege. Nothing should be enforced as a punishment which ought to be chosen as a duty and a pleasure. A child can easily be trained to prefer cleanliness to filth, work to idleness, use-



fulness and companionableness at home to waste of upon the street. It is useless to force a young man against his will; but if a college education for his desire on the part of the parent, it is easy so to train a maturing child that he will choose it for himself with that it was long before thoughtfully chosen for him. It runs through the whole of home life, and has innum

**A**T a recent meeting of the American Social Science Association there were some very helpful utterances by several educators on the subject of adult education. President Eliot touched the general nature of the problem of making modern sciences reach the mature portion of the population. He said that the sums invested in public schools, colleges and universities should be used to publish the most good for the whole people. Dr. M. M. Davis, State Library at Albany, N. Y., spoke of the importance of public collections of books. Men grow by using the knowledge and power that has been accumulated by those who have preceded them. Books make these stores available. It is the duty of the State to put these sources of information within reach of all. Dr. Henry M. Leipziger spoke of the importance of courses as one of the most effective means of general education. Dr. Leipziger is supervisor of the lectures which have been a part of New York's educational system. He referred to the rapid development of popular education in the past few years. In our large cities to the school has been added the evening school, the vacation schools, and the opening of the schools for recreation, instruction and social intercourse. The influence of the school to persons above school age is one of the advances of modern education. The question whether the State shall stop with the university or go further is still rightly in the negative. Men need knowledge not only for their livelihood, but as a means of life. During last year there were 143 places where systematic courses of lectures were given and 1,134,000 people listened to the 4,665 lectures. Free public lectures given at the schoolhouses have become a part of New York's educational system, and the movement is spreading in other parts of the country.

At the same meeting Dr. Hermon C. Bump, Director of the American Museum of Natural History in New York

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modern methods of making public museums minister to the needs of the entire body of citizens. He emphasized their importance in collecting facts as compared with the mere exhibition of specimens. All of these addresses were of great interest and value to teachers and other leaders of educational thought.

ONE of the greatest rewards of the teaching profession is the sense of achievement. This is possible only to the far-sighted and dead-in-earnest teacher. It does not enter into the experience of the one who is in the work merely to make a living; but it is a vital element in the professional enthusiasm and satisfaction of the true pedagogue who has had a "call" to teach, and who is in love with his profession. The sense of achievement may be felt in relation to an individual pupil, or to a whole community. It is a more common experience in the former sense, and a more exalted one in the latter. Usually a large time element is necessary. After months, perhaps years, of patient thought and effort, the happy day finally comes when a real, marked awakening and growth is discerned in the pupil. The teacher is conscious that what he has been aiming at, working and praying for, almost despairingly oftentimes, but steadily, has at last been accomplished. A mind has been quickened, a character has been formed, and a new force set to work for service of self and humanity. An intellectual and spiritual child has been begotten.

Or, some faithful superintendent, or other educational specialist, after long, wearing service, contending with all sorts of opposition, ignorance, indifference and stupidity, at last sees the tone of the community distinctly raised by his efforts; evils, abuses, ignorance disappearing, and order, efficiency, intelligence taking their place. This is what makes the teacher's life worth living. It is well to look and work for such seasons of inspiration.

A gifted and conscientious supervisor of music said to us recently, with honest pride shining in every feature of his glowing face, that after several years' work he could see that the whole musical atmosphere of his town had changed; that the people now demanded a distinctly higher order of music than they had even known how to appreciate before; that the average taste was far in advance of that of neighboring towns; and that he could safely say that seventy-five per cent of the children in the public schools could be depended upon to come onto the platform, if summoned, and sing a solo correctly and creditably. His pride was justifiable and far removed from mere boastfulness. We almost envied him his joyous sense of achievement.

THE article in our last issue entitled "The Passing of the Spelling Book" has been widely copied, and brought us a number of letters emphasizing different phases of the subject. We take this as an indication of a popular interest in this important "school art." It possibly shows a tendency of the educational pendulum to swing well back toward the useful and the practical, and away from what some are pleased to call modern "fads" or theories. The imperfect preparation for life's duties on the part of high school pupils who go into business is very much in evidence in commercial circles; and where such large sums of money have been spent in educational equipment, the question naturally suggests itself: Does the output show that the money is well spent? Because their letters are badly spelled and punctuated, many busy men of affairs decide offhand that it is not, and that modern educational methods are a failure. It seems to us, however, that this decision is hasty, and that the subject should be looked at from other points of view. Is it proven that the old spelling book and spelling match days always produced expert spellers? We think not; but that the majority in that day as well as this "went down," and only the exceptionally gifted ones won out and kept "the head." It seems to be true that some are born spellers, some achieve spelling, and some have spelling thrust upon them. One of our correspondents says: "It is not very difficult, I fancy, to write bright articles about the inability of school children to spell, judging from the number I see in the newspapers and magazines. But what I would like to know, and what I have so far been unable to get any explanation of from the critics, is why some children, and not an insignificant number either, do spell well? We have had a good many high school graduates in various capacities in the newspaper offices I have been connected with for the last thirty years or more, and I can't find any fault with their spelling. But somehow, such as these never get any credit, nor do the schools get any credit for them, in all the lucubrations concerning the failure of the schools to produce good spellers. I wish you would get some of your experts to discuss the capable speller once in a while. Perhaps he ought not to exist, but he surely does in spite of all the faults and failings of the existing causes and methods. Possibly there is some way of accounting for him, and I would like to know what it is."

We believe that some have a spelling *sense*, a sort of insight into the proportion of words, so that the ear suggests to the eye how the word should look. These persons can spell as the musical genius can improvise. Others can learn to spell fairly accurately by hard, persistent work. And others cannot, and never will, be able to spell correctly, no matter how long or hard they try. Those who are thus deficient should not take up employments that call for the faculty which they do not possess, any more than a person who cannot carry a tune should attempt to lead an orchestra. But the deficient are not common, and all who do not feel that they are spelling geniuses should make earnest efforts to master a subject which is at once so easily mastered, and so closely related to true success in business and professional life. And teachers should insist.

*Foreign Notes*

## RECENT LEGISLATION AFFECTING EDUCATION

It is very difficult for Americans to understand the attitude of the French government toward the religious orders. Even those of us who believe fully in secular public schools cannot comprehend a fanatical opposition to private schools, while those who question the wisdom of making even public schools purely secular naturally sympathize more or less with the suppressed teaching associations, the brotherhoods and sisterhoods which have borne so large and worthy a part in the education of the youth of France. Fundamentally the struggle between state and church in France is a struggle for power. It is necessary in admitting this to distinguish between the secular clergy and those belonging to orders or "congregations" as they are called. The former are generally native Frenchmen, for the most part, devoted to their duties, simple in their lives and loyal to the government as it exists. The latter are recruited in part from other countries (ultramontaine), and their allegiance to their order is superior to all other ties. The republic has good grounds for doubting their attachment to its institutions, and their proselyting zeal, which is intense, does not exhaust itself in efforts to win their pupils to the true church, but, consciously or unconsciously, instills into the susceptible mind of youth a passion for the old régime in which state and church were one and that one was the church. Such at least is the conviction of the government leaders, a fact which must be kept in mind in every criticism of the recent anti-clerical laws. The first of these measures, the law of July 1, 1901, simply required the religious associations to seek the authorization of the civil authority for their existence as an association and also separate authorization for every establishment, charitable or scholastic, that they might open. The resistance of many orders to this requirement is a well-known story and suddenly the government developed a rancor which had not appeared in the debate on the original measure. Not only were applications for authorization from individual orders denied, but a proposition was introduced into the legislature to refuse all authorizations, and in spite of much opposition this bill was carried by a decided majority in both chambers. The third measure in the series, which has just passed the lower chamber by the vote of 316 to 269, destroys the whole system of schools belonging to the "orders." Ten years are allowed for the complete application of the law, during which time all the religious associations, whether authorized or unauthorized, must wind up their affairs and leave the country.

No new members can be received during that time, and consequently the novitiates are suppressed at once excepting a few which are destined solely to recruit the teaching service in the French colonies. An amendment, which was carried in spite of the opposition of Premier Combes, makes the measure inapplicable to the colonies, but this does not deprive the government of the power conferred by the law of 1901 of closing schools in the colonies by special decree. The Senate has not yet taken action on the law, but no effectual opposition is there anticipated.

The closing of the clerical schools will force the government to provide for the education of at least one and one half million children who have hitherto been enrolled in the schools taught by monks and nuns. This does not include the hundred thousand young men in the classical colleges belonging to the "orders" nor the young women in convent schools. These children of the higher classes would not attend the state schools under any circumstances, and should the government carry out the extreme measure of suppressing all private schools many young people from the best families would simply be sent out of the country for their education.

The amazing feature of this whole affair is that the policy of suppression, or the anti-clerical policy, has been carried by large majorities in a country which is Catholic by an overwhelming majority.

The opposition to the English education law of 1902 was made the subject of special representation before Parliament last month on the occasion of a vote upon the appropriations. The "passive resistance" movement has reached ominous proportions, the number of persons summoned for refusal to pay the tax for sectarian purposes having reached 18,000 and the number of final notices 80,000. The movement, which involves the most respectable people, is increasing daily.

In Wales the opposition has taken an even more threatening form, the county councils having here with great unanimity refused to appropriate any money from local taxes for the support of sectarian schools. The overwhelming majority of the members of the Welsh councils are nonconformists, and with noble spirit they have taken the full responsibility in this matter rather than run the risk of having to prosecute their co-religionists one by one. In view of the widespread opposition and the bitter feelings everywhere excited by the unpopular law, strong hopes are felt that it will be radically modified at an early date.

The long expected bill to amend the education laws of Scotland was introduced in the House of Commons March 27th. The speech of Mr. Graham Murray submitting the measure passed in rapid review the

principal features of the existing system, together with the salient points of the proposed law. These pertain chiefly to matters of local control. For the small parish as an area of school administration the bill substitutes the county or county district, and thus vanishes the evil of petty neighborhood domination in school affairs. All burghs with the exception of Edinburgh, Glasgow, Dundee, and Aberdeen are merged into county districts. The school affairs of each district and undivided county are to be controlled by an elected school board. This body will have the appointment of teachers and the determination of the rate of school tax, which must be uniform throughout a district. The schools themselves will be under the immediate direction of local school managers, two thirds of whom are to be chosen by the parish. This provision—which is evidently intended as a sop to the displaced parish councils as well as a spur to local interest—is the only feature of the bill which is seriously criticised. The objection is raised that it continues in a new form some of the evils of the old parish system and introduces an artificial distinction between the “control” and the “management” of schools.

Besides their powers with respect to teachers and school taxes the district and county boards by the provisions of the bill are made the local authority for all grades of public education; but they have not authority to levy a tax for secondary education. The “whiskey money” or surplus from the tax on spirituous liquors can no longer be used for the relief of local taxes, but must be turned into the education fund. District school boards have the option of aiding denominational schools from the local taxes, and may also provide for the transit of school children living in outlying districts. The local boards may also supplement the pensions for teachers.

It will be seen that the Scotch bill wisely avoids forcing the local authorities to apply local taxes to schools under private management and thus repeating the serious mistake made by the English law of 1901. On this point Mr. Murray, who presented the measure to the House of Commons, made the following judicious statement:—

“There does not seem and cannot be any logical claim by any person not in a school board for direct aid from the rates. But at the same time there is a great deal of proper educational effort which does a great deal for the children of Scotland, conducted outside the pale of school boards. In particular, the Roman Catholics educate a great many children. Therefore I have not shrunk from leaving it to the school boards if they choose to give, under such conditions as they like, help out of the rates to those other educational establishments.

There is no compulsion upon them to do so; but much surprised on the provision being passed if, as you do not find that in centers of large educational lightened opinions, such as Glasgow, such assistance

It is evident from this dispassionate statement problem which has convulsed both France and I exist in Scotland.

#### MISCELLANEOUS NOTES

The report of the Mosely Educational Commission last month in London. Its general tenor can readily articles that have already appeared in various English the members appear to have been struck with the level education in this country and the universal belief in it tance. Our system of public high schools, with the types of training, commercial and manual training, made a profound impression. Mr. W. C. Fletcher, Liverpool, who has submitted a special report emboldened and opinions to the education committee of convinced from his talks with large manufacturers of they have a preference for highly educated men for tions in their establishments. "In England," he said, still true that a college or even a prolonged school dices a boy in applying for work." In general he is much more as a matter of course in this country than pass on to the high school than it is in England alertness of mind are stimulated in these schools, and especially valuable in business. The severest criticisms seem to be directed against the methods of public schools. The full report, especially with refutations, will be noticed hereafter in these columns.

Among vacation courses announced for the coming scholastic centers of Europe are a course in geography at the School of Geography, Oxford, during the first half a very attractive program of lessons in the French literature at the University of Grenoble during four weeks with July 1st.

Inquiries with respect to the Oxford course are to be made to the Curator, School of Geography, Broad Street, Oxford. For the courses at Grenoble is Monsieur le Président du Patronage, 4 Place de la Constitution, Grenoble, France.

*A Wedding*

The sky is deep and dazzling blue;  
Great, white cloud masses drift and pass  
Above the emerald groves of trees  
That cast deep shadows down the grass,  
And all the earth is strewn with flowers  
From the flushed, open palm of June;  
For this—it is a wedding day—  
The day that sets the world in tune.  
As glides the chorused voice of bells,  
Slipping to chains of silver sound,  
So e'er may happy years glide down  
This chain,—two lives together bound.  
Here in this silent, sacred place,  
An unseen, solemn Presence bows,  
To set its everlasting seal  
Upon a minute's passing vows  
Green garlands through the gloom breathe out  
Faint fragrance, like a gentle prayer;  
And all the waiting, hushed host feels  
A benediction in the air.  
But now the stillness deep is stirred.  
A soft, slow rustle starts and grows  
Beneath the sleeping crimson light  
That deepens downward like a rose.  
Now swelling out and flying up  
With beating wings in joyful strife,  
The viewless hosts of harmony  
Strike on the trembling strings of life.  
Nothing but light and love and joy  
Can touch that form of misty light,  
Whose golden hair against his dark  
Gleams like a star above the white  
Cloud laces trailing after her.  
Vibrating back to silence, the  
Rich airs listen to words that ne'er  
Can be unspoken,—as they flee  
The future grows the past, and glide  
Beyond recall th' attendant Fates,  
Held in the moment's hand; but ne'er  
Did paradise fling open gates  
To strains freer from notes of care,  
Than gushed when marriage's wide door paled  
Before her dazzling self within,—  
Kokassau's Prophet, or an Angel, veiled.

HELEN CARY CHADWICK.



## Book Notices

**NOTE.**—The number of books now published monthly is so large that the plan of promptly acknowledging by title, author, publisher (and 1 books sent us for review; and later, as space is available, give more seem most likely to be of interest and value to our readers.—PUBLISHER

**Outlines of Universal History.** By George Park Fisher. This book deserves more than a passing notice. Yet it is Fisher as its author makes any word of praise unnecessary. Historical subjects in modern times has been more thorough or more painstaking and careful in regard to his literary work. The temperament of the man is distinctly plain. The reader is sure to be guided and helped to an insight into the great law of cause and effect, which runs through all the human race as shown in the events of history. Profound detail is marvelous. One cannot help feeling impressed by the learning of the man. His eye sweeps the whole range from earliest times to the present day, and his mind seems to follow. Step by step the reader is led onward, until he finds his great drama. It is an education to read such a book. This is a revision of an earlier book along the same lines, bringing it up to date. Whatever the subject in which one is interested, it gives an authoritative account of its history. While designed as a reference work, it is also an unsurpassed reference work, and of great value. Numerous maps on thin paper are folded in, in appropriate places. Colored maps occupy single or double pages. There are charts, etc. American Book Company. Price, \$2.40.

**The Belles-Lettres Series, or Literature for Lite** The well-known firm of D. C. Heath & Co. has put the entire range of books fully representing the entire range of literature under a debt of gratitude to the educational world. Already more than one hundred and forty volumes have been prepared. They will represent the most significant literature from its beginning to the present time. Each volume from 128 to 400 pages, in handy volume shape, printed on clear, good-sized type. The series is divided into sections in charge of an editor who has a real claim to the title of editor. The series are as follows: (1) English Literature from Its Beginning to the Present; (2) Middle English Literature; (3) The English Dramatic Literature and Critical Theory; (4) Seventeenth and Eighteenth Century Poets; (5) Nineteenth Century Poets. The texts are, so far as editions, and they are unexpurgated. The volumes of the series contain each an admirable introduction, which helps to appreciate the work considered, and to observe its place in the history of literature. The biography, bibliography, notes, and glossary are the work of scholars and critics. In fact, these beautiful, handy volumes are desired in the way of a complete presentation of the material.

the English-speaking peoples. It goes without saying that the series is fore-ordained to success—at least, if the later volumes carry out the promise and come up to the standard of the volumes thus far published. The price is not the least attractive feature, and it is hard for the uninitiated to understand how such complete, scholarly, and mechanically perfect books can be sold at from forty to seventy-five cents each.

**The Roosevelt Book.** Selections from the writings of Theodore Roosevelt, with an introduction by Robert Bridges. This is sufficiently stirring and thrilling to interest the average American boy. It sets forth the attractions of the strenuous life. **Hero Tales Told in School.** By James Baldwin. It takes up certain stories from the world's literature which have been told for ages but which have never lost their charm, such as "How Apollo Came to Parnassus," "The Story of the Golden Apple," of "Paris and Helen," "How Charlemagne Crossed the Alps," and others. Charles Scribner's Sons. Both of these books are prettily illustrated, and are sold for the very reasonable price of 50 cents each.

**Wisdom and Will in Education.** By Charles William Super. This is a calm and thoughtful presentation of certain phases of educationism which will commend itself to all deliberate readers of pedagogical lore. Dr. Super believes in the science of education and in its being rightly understood by those engaged in it. He holds that the community should be as interested in educational matters as are teachers, and to that end he has written with a conviction that is apparent on every page. Dr. Super is no alarmist but he fears for the future of the schools if there be not greater attention given to their management along the lines of progress, for the history of civilization is but the history of education and the schools must be governed by highest motives and with faithfulness of attention to the coming generations. The book is a wholesome contribution to the thought of the day and deserves the candid attention of every student of sociology and education. Myers, Fishel & Co., Harrisburg, Pa.

**Tools and Machines.** By Charles Barnard. This is a book of information on tools in common use and on machines—their construction and their functions in the arts and trades—on the history and development of tools from primitive weapons, and on the latest improvements; all told in an easy, readable style that holds interest. It tells exactly what the every-day user of tools needs to know and seeks in vain to discover, and it gives to the expert in the use of machines and tools the information that is necessary to supplement his practical knowledge. There is no other book quite like this and its use in the shop, school and home workshop is to be commended. Silver, Burdett & Co.

**Composition and Rhetoric.** By Rose M. Kavana and Arthur Beatty. This is a novel presentation of the subject of rhetoric, the authors having developed a scheme for the study that is entirely out from the beaten paths and sufficiently unique to merit attention and careful study. The aim is to apply to the study of composition the studio method familiar to students of other arts. It resembles the so-called laboratory and other inductive methods of studying English in that it contains little theory and provides for much practice. The method of the book is distinctly a literary, not a rhetorical method, and differs from all others in its use throughout of a system of typical paragraph and

theme-models derived from particular pieces of literature in daily life. The introduction is an elaborate exposition and deserves careful reading. Their book is based on a thoroughly inductive and practical. We heartily commend it to all teachers of rhetoric and composition. Rand, McNally.

**The Force of Mind.** By Alfred T. Schofield, M.D. An interesting work is, *The Mental Factor in Medicine*, which shows the action of the mind in causing diseases, and in curing them. A rigorous believer in the action of the mind over matter, the author influences in the case of diseases which attack the body. He tries to make good his contention that if physicians should study the mind, the importance of the mental factor in medicine would be theirs in the practice of their profession and a large number of cures among their patients. His book is authoritative; he fortifies himself in his positions with copious quotations from the best thinkers and scientists, and his illustrative cases are convincing. Teachers and parents will find this a most valuable work, it being written in a popular style and entirely without the technical terminology of the psychologist or physician. Company.

**The Place of Industries in Elementary Education.** By Elizabeth Dopp. This is the age of industry; captains of industry are making their mark the hour. The wonderful activity in all matters material is being introduced into the subject of industries and their proper place in the schools. It is well when the first flush for the introduction of industries into the schools has passed that there be given to the subject the attention which it deserves. The science and philosophy of the subject are appreciated, the schools have taken on some form of it, and now knowing just what the relations thereof were to the fundamental principles of elementary education. Miss Dopp has contributed a most valuable study to the subject and her little book is most timely. University of Chicago Press.

**The Middle Ages and Modern Europe.** By Dana Merrick Whitcomb. This book is divided into two parts. Part I. "The Middle Ages;" and Part II. "A History of Modern Europe." The date chosen as the starting point is the earliest one recommended by the Committee of Seven. The relations of the history of the world to the rest of the world are carefully brought out. The work of the Middle Ages is emphasized as one of the greatest of the civilizing age. The debt of Byzantine and Arabic civilizations is recognized. The present times are fully described. As a thorough-going school book for students this book is to be highly commended. It will be useful in schools and colleges throughout the country. It belongs to the twentieth century text-books, which have made the name of D. Appleton & Co., famous wherever there are teachers and students.

**Old Time Schools and School Books.** By Clifton Johnson. A large, handsome volume, very fully illustrated with excellent engravings showing the growth that has taken place in the history of our schools and school books.

studied therein. Anyone who has to do with the text-books used in the present age cannot help being frequently impressed with the marvelous improvement of such books in every respect over those of a former day. This thought has often been expressed, but never before have we seen it fully set forth by the gathering together into one volume of the verbal and pictorial illustrations of the various styles of books used by different generations. It is almost an education in itself to read these fascinating chapters, and one cannot help feeling glad that his lot was cast in this late day of the world's civilization as he notes the crudities and absurdities, literary and artistic, which were imposed on his ancestors in the name of learning. It is a happy thought to work out this subject in such a thorough way, and the book makes an original contribution to the subject of our country's history. The Macmillan Company. Price, \$2 net.

**Dona Perfecta and El Nino de la Bola.** These two fine novels have been prepared for students in Spanish. The first by B. Perez Galdos, edited with introduction, notes, and vocabulary by Edwin Seelye Lewis; the second by Pedro A. de Alarcon, edited with notes and special vocabulary by Rudolph Schwill. Each of these stories has achieved marked popularity among Spanish-speaking people, and their editors have done wisely in preparing them for use in schools. Published by the American Book Company.

**An Elementary American History.** By D. H. Montgomery. Mr. Montgomery is a well known writer of schoolbooks of history. The present volume has been prepared to meet the demand for a short narrative history of our country, suited to the needs of beginners. Nothing of importance seems to have been left out. The arrangement is all that could be desired. The brief paragraphs and face type headings greatly assist in finding and memorizing the leading events described. There are a large number of excellent illustrations. Ginn & Co. Price, 75 cents.

**Language Lessons: A First Book in English; Grammar Lessons: A Second Book in English;** each by Wilbur Fiske Gordy and William Edward Mead. These books have been written in response to the oft-repeated complaints that our public schools are not teaching pupils how to write and speak good English. They are nicely printed, attractively arranged, and fully illustrated. The child of to-day is indeed fortunate in having the best qualified authors and teachers to prepare for him such text-books as these. If now the child mind and conscience can be appealed to to induce him to use at recess and on the playground that which he is so well taught in the schoolroom, there is hope of rapid improvement in the written and spoken language. Charles Scribner's Sons.

**Forms of English Poetry.** By Charles F. Johnson, L.H.D. This book contains a full explanation of the forms of poetry; namely, the Foot, the Line, and the Stanza; the Ballad, Sonnet, Ode, Dirges and Memorial Verse, the Lyric and Song, Society Verse and the Verse of Culture, the French Forms, the Epic, and the Romance. Everyone should be posted on these subjects. It will greatly help the student and general reader to appreciate the charms of English poetry to have such a practical knowledge of how it is written. We are sure that teachers of English will welcome this attractive little volume. American Book Company. Price, \$1.

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**The Gateway Series of English Texts**, edited by M. A. N. Wilson, is the field of college English. We have received from the series containing "Silas Marner," price, 40 cents; "Carlyle's Essay on the French Revolution," price, 35 cents; "Burke's Speech on Conciliation," price, 35 cents. The series is neatly printed and bound, and stands high among the series of English classics. American Book Company.

**In The Eclectic School Readings Series** we have called "Stories from Life," by Orison Swett Marden, printed in the well known style of the author of *Architects of Front*, etc., many interesting instances in the lives of men of great success. In the same series another volume gives "Great Stories," by Charles Dickens, edited by Jane Gordon. There are "Self-Help," by Samuel Smiles, edited by Ralph H. C. 50 cents; and "Lives and Stories Worth Remembering," price, 45 cents. American Book Company.

An attractive and handy series of **Shakespeare's Plays** by J. Rolfe, is being issued by The American Book Company. The following titles: **Macbeth**; **Hamlet**; **Midsummer Night's Dream**; **A Twelfth Night**. There are full, helpful notes, and an interesting history of the play, source of the plot, general comment on the play, attractive illustrations abound, and the text is the result of careful scholarship. The volumes are all of handy size for school use, each.

**The Lighting of Schoolrooms.** By Stuart H. Rowe. Principal Rowe is an authority on this subject. This is and brings the whole matter fully up to date. Great progress has been made in the past four or five years relating to easels, glass, etc. Also the whole subject of children's eyesight and architecture has kept pace with the progress in other lines up in this volume, which is a useful and valuable manual for architects, superintendents, and teachers. Longmans, Green & Co., London.

**Wisconsin Arbor and Bird Day Annual for 190**  
**Day Annual.** We have received from State Superintendent  
 two elaborate and beautifully illustrated pamphlets. The  
 attractive cover a draped United States flag with an American  
 its folds. Teachers who wish the latest and most attractive  
 Memorial Day, Arbor Day, and Bird Day celebrations  
 hand in these interesting and beautiful documents.

**The Ship of State.** By Those at the Helm. The book describe the Presidency, by Theodore Roosevelt; by Henry Cabot Lodge; The Life of a Congressman, by the Supreme Court of the United States, by David J. Brewer; John D. Long; The Naval War College, by John D. Long; Are Fed, by William Cary Sanger; How the Army is Ludington; Good Manners and Diplomacy, by William Treaties are Made, by Henry Cabot Lodge; Uncle Sam John K. Richards; and The American Postoffice, by A. L. List price, 40 cents.

**Poetry of the People.** By Charles Mills Gayley and Martin C. Flaherty, of the University of California. We have in this handy little volume a convenient collection of poems illustrative of the history and national spirit of England, Scotland, Ireland and America. The poems selected are those most characteristic of the people, showing their traditions, history and spirit. It is intended chiefly for use in the schools, and we know of its adoption and appreciation by several discriminating teachers, whose pupils are committing to memory the choice verses which it presents. Ginn & Co. Price, 50 cents.

**New Century History of the United States.** By Edward Eggleston. This is Edward Eggleston's last work, left by him in manuscript, and revised for publication at his request by George Cary Eggleston. It embraces the history of our country from the Norsemen legends of the year 1000 to the present day. It gives more space than is usual in such text-books to other public interests than war and politics. One interesting chapter is on water travel on rivers, another on roads, canals, and railroads; and the last two chapters deal with inventions and industry in the last half of the nineteenth century. The work is made very complete by maps, numerous illustrations, the Constitution of the United States, and a list of biographies of prominent men. American Book Company.

**Civil Government.** By John Fiske; new edition, with additions, by D. S. Sanford. There is no need of reminding any reader of the worth of this well known book in its original edition. It is familiar to all lovers of history. The changes which have been made in the new edition are recounted in the reviser's preface as: "Minor inaccuracies, the result of changed conditions, have been corrected. Some omissions have been made good. A fuller treatment of the federal executive departments and an account of new island dependencies have been added." These changes have added much valuable matter to the justly appreciated original work. Houghton, Mifflin & Co.

**Folk Tales from the Russian** is a collection of fairy tales retold in English by Verra de Blumenthal. The fairy lore and the myths of all nations have many characteristics in common, and the same underlying symbolic soul-life in its struggle and triumphs. These Russian tales are another welcome confirmation of the unity of the race in its human experiences. They are told in simple and charming language. The artistic features of the book, color, cover design, decorative pieces and illustrations are exceedingly satisfying to one's sense of fitness of outer dress to mental pictures. Rand, McNally & Co.

**Common Sense Didactics** is a work for teachers of common schools by Henry Sabin. It is an excellent contribution to the literature of didactics. It opens by pointing out the aim a teacher should have of constant growth toward the highest selfhood, and the need of a full understanding of the individual child. Based on these two high principles all that follows concerning every phase of the school life becomes of the greatest value. The closing chapter on "Books and Their Uses" is a fitting conclusion and worthily treated. Rand, McNally & Co.

**The Being With the Upturned Face.** By Clarence Lathbury. The Being is man, and the book is a prose poem. It tells of the soul's "touch of the Infinite," which makes no human aspiration audacious; of its wandering in its little self-made bypaths, only to return at last to its "Father's house augmented and glorified"; of "the human superscription" on all nature; that "the animal dies upward into the angel." And for the final word it sings of woman and of man in the wondrous marriage union, "To find the woman-heart is to find God's heart, to taste of immortality." Nunc Licet Press, Philadelphia.

In addition to the books reviewed in this number of *EDUCATION* the following have been received:—

*Ginn & Co.*: In the Standard English Classic Series: Tennyson's Gareth and Lynette, Lancelot and Elaine, and The Passing of Arthur, edited by

Willis Boughton, Ph.D.; Irving's Oliver Goldsmith, edited by Gaston. The Educational Music Course: Teachers' Editions, Grades, by James M. McLaughlin and W. W. Gilchrist. In the Modern International Language Series: Dippold Reader, Lessing's Minna Von Barnhelm, edited by Ric Minckwitz and Anne Crombie Wilder, B.A.; Gerstäck edited by Griffin M. Lovelace. Primary Arithmetic. Smith, Ph.D.

*D. C. Heath & Co.*: Advanced Course in Algebra. By Elements of Plane Surveying. By Samuel Marx Barton, F. Language Series: Storm's Pole Poppenspüler, by Dr. Labiche and Delacour's La Cagnotte, edited by W. O. F. in German Conversation and Composition, by E. C. Westman's Das Gymnasium zu Stolpenburg, edited by Valentin *American Book Company*: Moratin's El Si De Las Niñas, Ph.D., and F. M. Josselyn, Jr., Ph.D. Shakespeare's Edited by William J. Rolfe, Litt.D. Euripides' Iphigenia i William Nickerson Bates, Ph.D. Wagner's Die Meisters By W. P. Bigelow. Elementary Algebra. By J. H. Tann of Algebra. By George W. Hull, M.A., Ph.D.

*A. Flanagan Company*: Basketry and Weaving in the Se Pasch. Price, 20 cents. Development Lessons in Mensu Sell. Price, 25 cents. Library of Travel: A Little Journu by Marian M. George. Price, 15 cents. The Story of Al Boy. By Mary Muller. Price, 35 cents. Defects of Vislo Public Schools. By J. Whitefield Smith, B.S., M.D. Price

*D. Appleton & Co.*: Practical Exercises in Astronom Swezey. Price, \$1. Adolescence: Its Psychology. By Ph.D., LL.D. Vols. I. and II.

*Kosmos Publishing Company*: Diagnosis From the Eye. Lane, M.D. The Foundation of All Reform. By Otto Ca

*The Hayfield Mower Publishing Company*: The Hayfie of Progress. By the Mower-Man. Price, \$1.25 net.

*American Antiquarian Publishing Company*: Prehistor Monuments and Ruined Cities, or The Beginnings of Arch D. Peet, Ph.D.

*University Publishing Company*: Standard Literature S Coverley Papers, from The Spectator. Edited by Edward Ev

*Government Printing Office*: Report of the Librarian o Biblioteca Filipina; Select List of References on Ch Report of the Public Schools of Jamestown, N. Y., for inclusive, with Courses of Study. Calendar of the Uni 1903-1904. Also Catalogues of State Normal School, Sal wich University, Vermont.

### Periodical Notes

A group of American College Presidents in *The Booklovers Magazin* portraits of Benjamin Ide Wheeler, John Huston Finley, Edmund J. Jam William DeWitt Hyde, Charles Franklin Thwing, William H. P. Fau Dabney.—Two articles in *Everybody's* for June will exceptionally inte titled "Is America Developing an Aristocracy?" and the other "Consu Plague."—Some excellent suggestions on "Up-to-date Discipline " teachers by Mrs. Theodore W. Birney in the current *Delineator*.—"Mot is the title of a valuable article in the *Designer* for June.—*The Youth's* the time most full of promise is the time we are living in, and every spirit of looking forward and not back.—*Success* for June claims to issued." It is certainly attractive. A most interesting photograph of his sons is one feature of this number.—In the June *Atlantic Month* discusses "The Ethics of Taxation," severely criticising indirect taxatio of taxing, and hoping for a coming reform in taxation methods in the ne field has a splendid article in the current Columbia University *Quarterly* body's Workshop."—The literary and artistic features of *Harper's Mon* and *McClure's* are fully up to the high average of former numbers.

# Newest Secondary Text-Books

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| <b>Scheffel's</b> Der Trompeter von Säckingen (Buehner) . . . . .                    | <b>.75</b>    |
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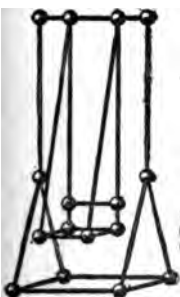
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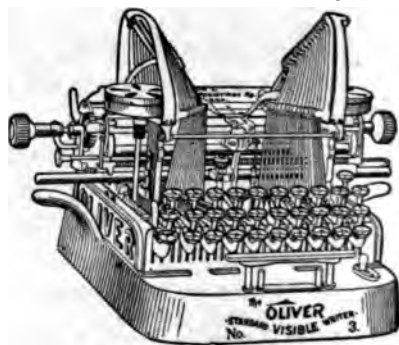
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### TABLE OF CONTENTS

|                    |                      |                          |
|--------------------|----------------------|--------------------------|
| Architect's Fees.  | Fences.              | Temperature.             |
| Assembly Rooms.    | Flooring.            | Toilet Rooms.            |
| Balustrade.        | Floors.              | Trees and Shrubbery.     |
| Basement.          | Floor Plans.         | Ventilation.             |
| Blackboards.       | Foundations.         | Walls—Plastered.         |
| Boiler Rooms.      | Hand Balling.        | Wardrobes.               |
| Building Material. | Height.              | Windows.                 |
| Ceilings.          | Humidity.            | Window Shades.           |
| Chalk Troughs.     | Humidostat.          | Wood Finish.             |
| Chimneys.          | Janitor's Room.      | Etc., Etc., Etc.         |
| Class Rooms.       | Lighting.            |                          |
| Cloak Rooms.       | Material.            | Heating and Ventilation. |
| Coal Bins.         | Metal Work.          |                          |
| Corridors.         | Partitions-Movable.  | Methods of Heating.      |
| Deafening.         | Principal's Room.    | Furnace Heating.         |
| Doors.             | Roofs and Roofing.   | Steam Heating.           |
| Drainage.          | Sites (location).    | Natural Ventilation.     |
| Dust Flues.        | Sites (how secured). | Mechanical Ventilation.  |
| Entrances.         | Stair Cases.         | tion.                    |
| Elevators.         | Steam.               | The Amount of Air        |
| Equipment.         | Teacher's B'kasses.  | Required for Ven-        |
| Excavations.       | Teacher's Room.      | tilation.                |
| Exposure.          | Teacher's W'drobe.   |                          |

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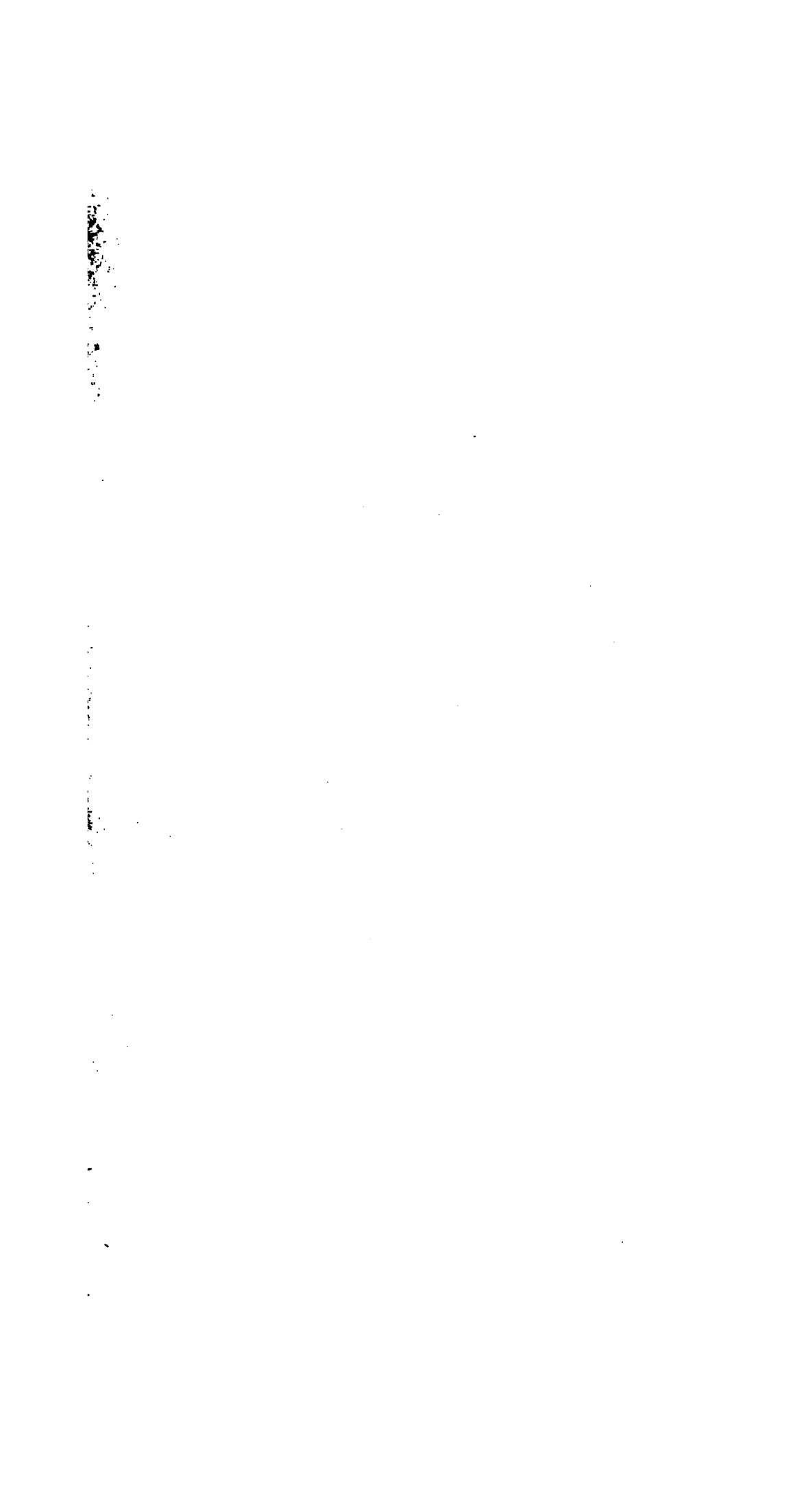
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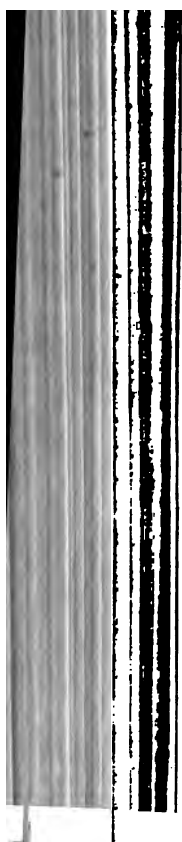
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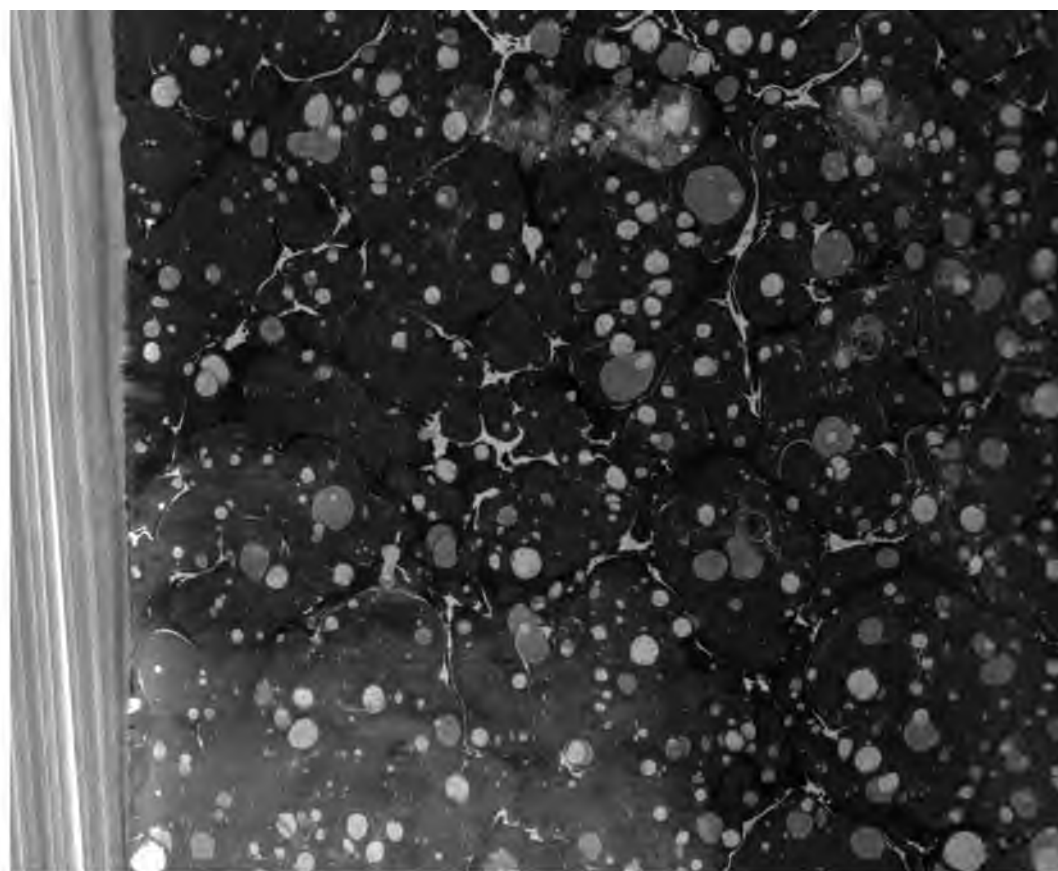












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